A TREATISE

ON

THE LAW OF PATENTS

FOR

USEFUL INVENTIONS.

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A TREATISE

ON

THE LAW OF PATENTS

FOR

USEFUL INVENTIONS

IN THE

UNITED STATES OF AMERICA.

BY

GEORGE TICKNOR CURTIS,

COUNSELLOR AT LAW.

BOSTON:

CHARLES C. LITTLE AND JAMES BROWN.

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PREFACE.

THE following work, the fruit of careful studies in a department of jurisprudence of great practical importance, is presented to the Profession, not without anxiety as to its reception. This branch of the law is so peculiar, the subjects with which it is concerned are so abstruse, and so much caution is requisite in dealing with its principles and in combining them into a system, that no writer can expect wholly to satisfy the wants of his readers, who does not bring to its treatment a force of intellect and a reputation as a jurist, which entitle him to be regarded in the light of an authority. But it cannot be my hope, as it is not my desire, to escape criticism. Looking upon the law as a science of vast practical consequence to mankind, and desiring to discharge my humble debt to its Profession, I shall gratefully receive, from any competent source, any suggestions of errors or imperfections in a work designed for practical use.

I have endeavored to walk carefully by the light of

adjudged cases; and although experience has taught me that the Patent Law admits of less reduction to precise rules and axioms, than any other branch of jurisprudence, I have endeavored to indicate the true uses of the judgments and opinions of the courts. The opinions and decisions of judges in patent causes can rarely be treated strictly as precedents, unless they concern the construction of a statute. They are to be regarded as illustrations of the principles of the law, when applied to a particular state of facts; and consequently a precise rule is rarely to be eliminated from them, by separation of the principle from the facts to which it has been applied, unless it is certainly one of general or universal application. Correctly regarded, indeed, it is the office of all adjudication, to apply the principles of the law, with nice discrimination, to the ever varying circumstances of different states of fact, and not to rely upon former decisions, as absolute precedents, where the facts are not certainly the same. But this is peculiarly and eminently true, in the administration of the Patent Law.

Boston, May 1st, 1849.

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p. 105, note 1 to § 117, *for* 1 Howard, *read* 4 Howard.
p. 162, note 2 to § 155, *for* Har*nan* *v.* Playne, *read* Har*mer* *v.* Playne.
p. 168, note 2 to § 159, *for* Savoy *v.* Price, *read* Savory *v.* Price.
p. 173, note 2 to § 163, *after* Brundon *v.* Hawkes, *insert* 4 B. & Ald. 540.
p. 190, note 4, *for* Har*nan* *v.* Playne, *read* Har*mer* *v.* Playne.
p. 232, note 2, *for* Woodworth *v.* Sherman, 2 Story's R. 171, *read* 3 Story's R. 171.
p. xv, Index of Cases, *for* Rickford *v.* Skewes, *read* Bickford, &c.

PRELIMINARY OBSERVATIONS.

WRITERS on the Law of Patents for useful inventions have often introduced their discussions of this branch of the law, by tracing the history of monopolies in the Law of England. This example has not been followed in the present work, because it is believed that it tends to encourage incorrect conceptions of the legal nature of a patent privilege. A patent for a useful invention is not, under our law, or the law of England, a grant of a monopoly, in the sense of the old common law. It is the grant by the government, to the author of a new and useful invention, of the exclusive right, for a term of years, of practising that invention. The consideration, for which this grant is made by the public, is, the benefit to society resulting from the invention; which benefit flows from the inventor to the public in two forms; *first*, by the immediate practice of the invention, under the patent; and *secondly*, by the practice of the invention, or the opportunity to practise it, which becomes the property of the public, on the expiration of the patent. As the exercise of the invention is wholly within the control of him who has made it, who may confine his secret entirely within his own breast, it is apparent that his

consent to make it known and available to others, and finally to surrender it to the public, becomes a valuable consideration, for which, upon the principles of natural justice, he is entitled to receive compensation, in some form, from the public to whom that consideration passes. Inventors, in this respect, stand upon the same broad ground with authors. Both of these classes of persons have created something, intellectual in its nature, the knowledge of which it is desirable to others to possess. Both of them have, at first, the complete right of disposition over that which they have created; and when they part with the exclusive possession of this knowledge and confer upon others the opportunity of reaping the benefits which it confers, they manifestly consent to something for which they are entitled to receive an equivalent.

Whether we regard the knowledge, remaining for the present in the exclusive control of him whose intellectual production it is, as property, or as a possession of ideas, to which some other term might be more appropriate, it is still a possession, of which the owner cannot, by any rule of natural justice, be deprived, without his consent. In this view, it may, as it seems to me, justly be termed property; for although in political economy, and in common speech, material possessions, or the rights growing out of them, are the objects generally included under that term, yet no one will question that ideas constitute, in ethical contemplation, a portion of a man's possessions entirely under his own control; and in the case of useful inventions, or of written thought, there is to be added to the power of control the further economical fact, that other men will part with valuable possessions of all kinds, in order to obtain that invention or writing in exchange.

For these and for other reasons, which I have endeavored more fully to develop elsewhere, in relation to the rights of authors, I do not hesitate to affirm, that in natural justice — the ethics of jurisprudence, by which civil rights are to be examined, apart from all positive law, but on which positive law is usually founded — the intellectual conception of an inventor, or a writer, constitutes a valuable possession, capable of being appreciated as a consideration, when it passes, by his voluntary grant, into the possession of another. If, by the same voluntary grant, this possession is bestowed upon the public, the logical justice of compensation, in some form, will appear, at once, by supposing the benefit to have been conferred exclusively upon any one of the mass of individuals who form in the aggregate the moral entity termed the public.

Let us suppose that A., by the exertion of his inventive faculties, has ascertained, that by placing matter in certain positions to be operated upon by the forces of nature, a result will be produced, in the shape of an instrument, wholly unknown before, and capable of being usefully applied to the wants of mankind. Let us suppose that B., seeing the result, but wholly ignorant of the process by which it may be attained, desires to possess that instrument. Common gratitude would prompt him to return something valuable for it, if it were given to him; common policy would lead him to offer something for it, if it were not freely given; and common justice requires that he should not take it, without an equivalent. How does it alter the case, if, instead of a single specimen of the instrument, we suppose A. to have retained in his recollection the process by which copies of that instrument may be indefinitely multiplied, and that

it is the secret process of making the thing, the intellectual conception and knowledge, which B. desires to possess? If he obtains it, he can make the thing for his own use, or for the use of others, and by so doing can acquire valuable possessions in exchange; all of which A. could do exclusively, by retaining his own secret. But if he imparts that secret to B., he is surely entitled to receive for it some reward or remuneration.

This secret the inventor undertakes to impart to the public, when he enters into the compact, which the grant of a patent privilege embraces. In that compact, he promises, after the lapse of a certain period, to surrender to the public completely the right of practising his invention; and as a guaranty against his concealment of the process by which it is to be practised, and to prevent the loss of this knowledge, he is required to deposit in the archives of the government a full and exact description in writing of the whole process, so framed, that others can practise the invention from the description itself. The public, on the other hand, through the agency of the government, in consideration of this undertaking of the inventor, grants and secures to him the exclusive right of practising his invention for a term of years.

In all this, a patent right, under the modern law of England and America, differs essentially from one of the old English Monopolies. In those grants of the crown, the subject-matter of the exclusive privilege was quite as often a commodity of which the public were and long had been in possession, as it was any thing invented, discovered, or even imported by the patentee.

Nothing passed, in such cases, from the patentee to the public, in the nature of a consideration for the enormous privilege conferred upon him; but the public were

robbed of something already belonging to them, viz., the right to make or deal in a particular commodity, for the benefit of the favored grantee of the crown. So broad is the distinction between these cases and that of the meritorious inventor or importer of something new and useful, that when Parliament, in the 21 James I., taking encouragement from the courts of law, prohibited the granting of exclusive privileges in trade, by the Statute of Monopolies, they introduced an exception in favor of "letters-patent and grants of privilege for the term of one-and-twenty years or under, heretofore made, of the sole working or making of any manner of new manufacture, within this realm, to the first and true inventor or inventors of such manufactures, which others at the time of the making of such letters-patent and grants, did not use, so they be not contrary to law, nor mischievous to the state, by raising the prices of commodities at home, or hurt to trade, or generally inconvenient," &c.

Upon this exception, the law of England, concerning Patents for Useful Inventions, stands to this day.

The modern doctrine, in England, and undoubtedly the doctrine of our law, is, that in the grant of a patent right, a contract, or, as it has been said, a bargain, takes place, between the public and the patentee. As far as the old cases on the subject of monopolies furnish, like other cases of grants by the crown, rules and analogies for the construction of this species of grant, so far the history of monopolies has a bearing upon this branch of jurisprudence. But it should always be remembered that in the grant of a patent privilege, as now understood, a contract takes place between the public and the patentee, to be supported upon the ground of mutual considerations, and to be construed, in all its essential

features of a bargain, like other contracts to which there are two parties, each having rights and interests involved in its stipulations.

It is necessary also to have clear and correct notions of the true scope of a patent right, because its nature and character will show whether there is any close analogy between such privileges and those to which the term monopoly is correctly applied. In this connection, therefore, I shall attempt a brief general description of the subject of protection, in patent rights; without, however, designing to lay down definitions, or to draw exact lines, within, or without which controverted cases may fall; but solely with the purpose of stating certain general principles and truths, the application and development of which may be found to assist, in particular cases, the solution of the question, whether a particular invention or discovery is by law a patentable subject.

In this enquiry it is necessary to commence with the process of exclusion; for although, in their widest acceptation, the terms invention and discovery include the whole vast variety of objects on which the human intellect may be exercised, so that in poetry, in painting, in music, in astronomy, in metaphysics, and in every department of human thought, men constantly invent or discover, in the highest and the strictest sense, their inventions and discoveries in these departments are not the subjects of the patent law. Another branch of jurisprudence, of a kindred nature, aims at the protection and establishment of property in literary productions, and in some of those which fall within the province of the fine arts. The patent law relates to a great and comprehensive class of discoveries and inventions of some new and useful effect or result in matter, not referable to the department of the

fine arts. The matter of which our globe is composed, is the material, upon which the creative and inventive faculties of man are exercised, in the production of whatever ministers to his convenience or his wants. Over the existence of matter itself, he has no control. He can neither create nor destroy a single atom of it; he can only change its form, by placing its particles in new relations, which may cause it to appear as a solid, a fluid, or a gas. But under whatever form it exists, the same matter, in quantity, that was originally created, exists now, and, so far as we now know, will forever continue to exist.

The direct control of man over matter consists, therefore, in placing its particles in new relations. This is all that is actually done, or that can be done — namely, to cause the particles of matter existing, in the universe, to change their former places, by moving them, by muscular power, or some other force. But as soon as they are brought into new relations, it is at once perceived that there are vast latent forces in nature, which come to the aid of man, and enable him to produce effects and results of a wholly new character, far beyond the mere fact of placing the particles in new positions. He moves certain particles of matter into a new juxtaposition, and the chemical agencies and affinities called into action by this new contact, produce a substance possessed of new properties and powers, to which has been given the name of gunpowder. He takes a stalk of flax from the ground, splits it into a great number of filaments, twists them together, and laying numbers of the threads thus formed across each other, forms a cloth, which is held together by the tenacity or force of cohesion in the particles, which nature brings to his aid. He moves into new posi-

tions and relations certain particles of wood and iron, in various forms, and produces a complicated machine, by which he is able to accomplish a certain purpose, only because the properties of cohesion and the force of gravitation cause it to adhere together and enable the different parts to operate upon each other and to transmit the forces applied to them, according to the laws of motion. It is evident, therefore, that the whole of the act of invention, in the department of useful arts, embraces more than the new arrangement of particles of matter in new relations. The purpose of such new arrangements is to produce some new effect or result, by calling into activity some latent law, or force, or property, by means of which, in a new application, the new effect or result may be accomplished. In every form in which matter is used, in every production of the ingenuity of man, he relies upon the laws of nature and the properties of matter, and seeks for new effects and results through their agency and aid. Merely inert matter alone is not the sole material with which he works. Nature supplies powers, and forces, and active properties, as well as the particles of matter, and these powers, forces, and properties are constantly the subjects of study, inquiry, and experiment, with a view to the production of some new effect or result in matter.

Any definition or description, therefore, of the act of invention, which excludes the application of the natural law, or power, or property of matter, on which the inventor has relied for the production of a new effect, and the object of such application, and confines it to the precise arrangement of the particles of matter which he may have brought together, must be erroneous. Let us suppose the invention, for the first time, of a steam-engine,

in one of its simplest forms, the use of steam as a motive power having never been discovered before. Besides all the other powers of nature, of which the inventor avails himself almost without thought, by which the different parts of his machine are held together and enabled to transmit the forces applied to them, he has discovered and purposely applied the expansive power of steam, as the means of generating a force that sets his machine in motion. All that he actually does with the matter in which this expansive power resides, is to turn certain particles of matter into certain particles of vapor, and to bring that vapor in contact with an obstructing mass of matter, to which it communicates motion, by pushing it from its place. But the invention consists in observing and applying this natural power, the expansive force of steam, to produce the effect or result of moving the obstructing mass of matter from the place where it was at rest. It would be singularly incorrect and illogical to say, that a man who should take a certain other quantity of matter, and convert it into a certain other quantity of steam, and bring that steam in contact with a certain other obstructing mass of wood or iron, for the purpose of moving it, would not produce the same effect by the same means, as the person who first discovered and applied the expansive power of steam to move a piece of wood or iron.

Again, let us take the case of an improvement in the art of manufacturing iron, which consisted in the discovery that a blast of air introduced into a smelting furnace in a heated state, produces an entirely different effect on the iron manufactured from the ore, to that produced by blowing the furnace with cold air. What the inventor did, in this case, was, to introduce a certain amount of

caloric into the blast of air, on its passage from the blowing apparatus into the furnace, thereby creating a blast of a new character, productive of a new effect; and any other person who should introduce caloric into a certain other quantity of atmospheric air, and use that air, so heated, to blow a smelting furnace, would do precisely the same thing. The invention consisted in the discovery and application of the law or fact, that heated air produces a different effect from cold air, in a particular art, and in thereby accomplishing a new result in that art.

In these and in all other cases, there is a particular arrangement of matter, which consists in the new relations and positions in which its particles are placed. But beyond this, there is also the effect or result, produced by the action of the forces of nature, which are for the first time developed and applied, by the new arrangement of the matter in which they reside. The use and adaptation of these forces is the direct purpose of the inventor; it is as new as the novel arrangement of the particles of matter; and it is far more important. In fact, it is the essence and substance of the invention: for if no new effect or result, through the operation of the forces of nature, followed the act of placing portions of matter in new positions, invention would consist solely in new arrangements of particles of inert matter, productive of no new consequences beyond the fact of such new position of the particles.

However inadequate, therefore, the term may be, to express what it is used to convey, it is obvious that there is a characteristic, an essence, or purpose of every invention, which, in our law, has been termed by jurists its *principle;* and that this can ordinarily be perceived and apprehended by the mind, in cases where the purpose

and object of the invention does not begin and end in form alone, only by observing the powers or qualities of matter, or the laws of physics, developed and put in action by that arrangement of matter, and the effect or result produced by their application. Even in cases where the subject of the invention consists in form alone, the principle or characteristic of the invention is the result produced by the aid and through the action of the qualities of matter. As, for instance, to take the simplest case, if I make a round ball, for the first time, of clay, or stone, or wood, I do so by putting the particles of matter in those relations and positions, in which, through the attraction of cohesion which holds them together, the result of spherical form will be produced; and this result, so produced, is the essence or principle of the invention. In the case of inventions which are independent of form, we arrive at the principle of the invention in the same way. As, if I, for the first time, direct a column of steam against a piece of wood or iron, for the purpose of producing motion, the characteristic or principle of my invention consists in the use and application of the expansive force of steam and the effect of motion thereby produced; and these remain logically the same, whether the form and size of the wood or iron, and the form or size of the column of steam are the same as mine, or different.

It is apparent, then, that the mere novel arrangement of matter, irrespective of the purpose and effect accomplished by such arrangement through the agency of natural forces or laws, or the properties of matter, is not the whole of invention; but that the purpose, effect, or result, and the application of the law, force, or property by means of which it is produced, are embraced in the

complex idea of invention, and give the subject of the invention its peculiar character or essence. And if this is true it is easy — and as correct as it is easy — to advance to the position that the discovery and application of a new force or law of nature, as a means of producing an effect or result in matter never before produced, may in some cases be the subject of a patentable invention. When it has been laid down that a "principle" — meaning by this use of the term, a law of nature, or a general property of matter, or rule of abstract science — cannot be the subject of a patent, the doctrine, rightly understood, asserts only that a law, property, or rule cannot, in the abstract, be appropriated by any man; but if an inventor or discoverer for the first time produces an effect or result, practically, by the application of a law, he may so far appropriate that law, as to be entitled to say, that whoever applies the same law to produce the same effect or result, however the means, apparatus, forms, or arrangements of matter may be varied, practises or makes use of his invention, unless the variation of means, apparatus, method, form, or arrangement of matter, introduces some new law, or creates some new characteristic, which produces or constitutes a substantially different result. For, in all such cases, the peculiarity of the invention consists in the effect produced by the application of the natural law, as an agent; and this effect is not changed, by the use of different vehicles for the action of the agent, provided there is still the same agent, operating substantially in the same way, to produce substantially the same effect or result.

This may be illustrated by several inventions or discoveries, for which patents have been granted and which have been the subjects of litigation. One of the most

striking of these cases is that already mentioned, of the application of a hot air blast to the production of a particular effect in the manufacture of iron. It is very easy to say, in general terms, that no man can appropriate to himself the use of caloric, which is a substance, or element, or force in nature, bountifully supplied, as the common property of mankind. But if any man has discovered that the use of caloric in a particular manner, never before observed, will, as a universal fact, produce a particular effect, of a new character, upon matter, what reason can exist why he should not appropriate to himself the production of that effect by the use of that particular agent? His appropriation, in such a case, would embrace strictly what he has invented. It may be more or less meritorious; it may have been more or less difficult or easy of discovery; it is still his invention, and any one else who does the same thing after the inventor, however he may vary the particular means or apparatus, practises that invention which the inventor was the first to discover and announce to the world. If the patent law were to say, in this case, that the invention or discovery could not be appropriated by him who had made it, because caloric is the common property of all men, it would be obliged, in consistency, to say that a certain arrangement of wood and iron, constituting a new machine, could not be appropriated by the inventor, because cohesion, gravitation, and the laws of motion, which are all applied by the inventor to the accomplishing a certain effect, are the common property of every man. But the patent law does not come to such determinations. It proceeds upon the truth, that while the properties of matter, the forces, or elements of nature are common property, any man who applies them to the production of a new and useful

effect in matter, may rightfully claim to have been the inventor of that application to the purpose of that effect. The effect itself is what is commonly regarded as the patentable subject; but as that particular effect must always be produced by the application of the same properties of matter, or the same forces or elements in nature, it is correct to say that the appropriation rightfully includes their application to the production of the effect, and that to this extent they may be appropriated.

Inventions which consist in the application of the known qualities of substances, extend the appropriation of the inventor to those qualities in the same manner and in the same sense. For instance, in the case of Walton's improvement in the manufacture of cards for carding wool, &c., which consisted in giving elasticity and flexibility to the backs of the cards, by making the sheet on the back, in which the teeth are inserted, of India rubber, instead of leather. The qualities of elasticity and flexibility in India rubber were common property; but this did not prevent the inventor from sustaining a patent, which was held to cover the general ground of giving to the backs of cards elasticity and flexibility derived from India rubber, by whatever form of application of the India rubber the effect might be produced.[1]

In the same manner, inventions which consist in the application of a well known law of physical science, involve and admit of the appropriation of that law in its application to the production of the particular effect, however the machinery or apparatus may be varied. There is a known law of physics, that the evaporation of a liquid is promoted by a current of air, and this law is

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[1] See *post*, p. 305.

common property. An invention of certain improvements in evaporating sugar consisted in applying this law, by forcing atmospheric air through the liquid syrup, by means of pipes, the ends of which were carried down nearly to the bottom of the vessel containing the solution; and it is obvious that any person who should apply the same law to the same purpose, though by a different apparatus, would practise the same invention.[1] Although, therefore, it is not safe, in reasoning upon the patent law, to lay down general rules, of an abstract character, with the purpose of describing what every inventor appropriates to himself, without regard to the particular circumstances of the invention, yet it is, on the other hand, equally unsafe to assume, because the properties of matter, or the laws of physics, or the forces of nature, are common property, that no inventor can establish a claim of a general character, irrespective of particular methods or forms of matter, to the application of such properties, laws, or forces in the production of a certain effect.

It is, in truth, wholly incorrect to say that the inventor, in such cases, because his patent is held to embrace such a general claim, monopolizes the law, property, or quality of matter which he has applied by a particular means to the accomplishment of a certain end. His patent leaves the law, property, or quality of matter, precisely where it found it, as common property, to be used by any one, in the production of a new end, by a new adaptation, of a different character. It appropriates the law, property, or quality of matter, only so far as it is involved in the subject with which, the means by which, and the end for which the inventor has applied it; and this application

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[1] *Post*, p. 307.

constitutes the essence and substance of the invention, in all cases, and is in reality what the patentee has invented. He cannot be deprived of it, without violating the principles on which all property in invention rests, and denying the whole policy of the patent law. The test which marks the extent and nature of his just appropriation is the same that is applicable to every invention.

This test may be stated thus; that the truth, law, property, or quality of matter, which, by reason of its application, enters into the essence of an invention, may be appropriated, to the extent of every application, which, according to the principles of law, and the rules of logic, is to be deemed piracy of the original invention.

One of the most well settled as well as soundest doctrines of the patent law, is, that where form, arrangement of matter, proportion, method of construction, or apparatus employed, are not of the essence of the invention, any changes introduced in them, which do not effect a change in the characteristic, or purpose of the invention, are changes in immaterial circumstances. When the patent is a patent for form, or particular arrangement, or, for the apparatus devised to accomplish a particular effect, changes in these respects will be changes in the subject-matter of the invention; but in cases where the invention has a characteristic or an aggregate of characteristics, independent of particular form, method, arrangement, or apparatus, changes in these things amount only to the substitution of one equivalent for another, unless they cause a change in the characteristic, essence, or, as it is commonly called, the *principle* of the invention. This is very clearly seen in the case of machinery. The characteristic, or principle of the invention, consists in producing a certain effect by the appli-

cation of motion, through a form of apparatus adapted to that result. But if the same effect of the combined operation of the different parts of the mechanism can be produced by substituting a different contrivance, which does not change the characteristic of the machine, but is a mere equivalent for the part for which it is substituted, such a substitution is only a different mode of practising the same invention.

In this sense, all inventions are independent of form, except those whose entire essence, purpose, and characteristics begin and end in form alone; as would be the case with the manufacture of a sphere, or a cube, for the first time; and as is the case, with all manufactures, the utility and advantage and proposed object of which depend on form. But where there is a purpose that does not begin and end in form alone, where the form or arrangement of matter is but the means to accomplish a result of a character which remains the same, through a certain range of variations of those means, the invention is independent of form, and arrangement, to this extent, that it embraces every application of means which accomplishes the result without changing its nature and character. In other words, it may be stated, as a general proposition, that in the characteristic, or principle of an invention, are embraced the truth, law, property, or quality of matter, which is applied to the production of a result, and the result of such application; and that, by reason of such application, the truth, law, property, or quality of matter is appropriated, to the extent of all other applications which a jury, under the guidance of the law, shall consider as a piracy of the former.

In coming to this result, the Patent Law establishes no monopoly beyond the fair fruits of actual invention. It

protects the real inventor in the enjoyment of what he was the first to produce; and it recognizes, as substantive inventions, all changes which may be produced in the same line of experiment, or in the same department of labor, which introduce new characteristics, new results, or new advantages, not embraced by the former invention. As long as the Patent Law exists at all, to afford protection to the labors of ingenious men, it must proceed upon this fundamental principle. It is now too late in the history of civilization, to question the policy of this protection, which forms a prominent feature in the domestic polity of every nation which has reached any considerable stage of progress in the arts of civilized life.

It will be seen in the following pages, how far these views have prevailed in the administration of the Patent Law, in England and America, and to what extent they have been developed, in particular cases. They have led, in the construction of patents in England, to a somewhat different spirit from that which formerly animated the courts of law; for formerly, the judges exercised their ingenuity to defeat every patent that came before them, if it could by possibility be defeated. This was done upon the notion, that a patent is the grant of a privilege against common right; and hence some judges were in the habit of saying that they were "not favorers of patents." But within the last twenty years, a different view has been adopted; the more just and liberal doctrine has been acted upon, that public policy requires the encouragement of the inventive powers of ingenious men, and that this policy is supported by every consideration of justice. The consequence has been, that the Patent Law has made greater advances, in England, within the last twenty years, towards a consistent and

admirable system of justice, than it has ever made before during the whole period that has elapsed since the enactment of the statute of Monopolies.

In America, the more liberal policy has always prevailed, from the time when patent-rights came under the protection of the General Government; and the rule has been often laid down by the courts of the United States with a good deal of strength — as if in obedience to the spirit of the Constitution — that patents ought to be construed liberally. Perhaps the general language which has thus been employed by judges, would lead to the conclusion, that the leaning of the courts is, systematically, in favor of the patentee and against the public; but this tendency has not been exhibited so strongly, in practice, as to derange the administration of the law.

The truth is, a patent should be construed as, what it really is, in substance, namely, a contract or bargain between the patentee and the public, upon those points which involve the rights and interests of either party. These points relate to the extent of the claim, and to the intelligibility of the description for the purposes of practice. The first is universally a question for the court; the last is generally a question for the jury, under the direction of the court. As to the first question — the extent of the claim presents at once the relations between the patentee and the public; for it involves, among other things, the inquiry, whether the patentee has claimed any thing beyond what was really his own invention. If, in representing himself as the inventor of the thing for which he has asked and received a patent, the inventor has included in his claim any thing that existed before, he has made a representation untrue in point of fact; and whether he has made this representation intentionally or

unintentionally, the grant of the patent proceeds upon it, and if it is not true, the grant is not supported by an existing consideration, such as the inventor has represented it to be. In determining this question, whether the patentee has really included in his claim something which he did not invent, two things are to be ascertained; *first*, whether he makes use of any thing not new; and *second*, whether that thing, according to the fair import of his language, is represented to be a part of the invention which he claims to have made. The fact of whether he makes use of any thing not new, is a question depending upon evidence, if it is not manifest on the face of the description. It is upon the second branch of the inquiry, whether the old thing is really included in the claim of invention, that the true principles of construction have to be applied. Recollecting, on the one hand, that if the public have been misled, the patent ought not to stand, because of the false representation; and, on the other hand, that a construction, which will destroy the patent, ought not to be adopted lightly, it would seem to be the true rule, to construe the patent fairly, and so as to arrive at the just import of the language in which the claim is set forth. But if, after applying this rule, the question remains doubtful whether the claim is not broader than the invention, then the rule should be adopted, in favor of the patent, that the patentee is to be presumed to have intended to claim no more than he has actually invented. Every patentee is presumed to know the law, and to know that if he includes in his claim something which he has not invented, his claim is void. Such a claim is a kind of fraud upon the public, with whom the applicant offers to enter into a contract, when he asks for his patent; and fraud is never to be presumed, but is always

to be proved. The rule, therefore, which presumes, in doubtful cases, that the patentee intended to claim no more than his actual invention, is founded in a maxim of general application to contracts; and it will be seen, in practice, that it has no tendency to support patents which ought not to be supported, or to encourage loose and sweeping claims. In all cases which are not doubtful,—where it is manifest that the claim admits of no construction but that which makes it too comprehensive to be valid,—this rule will have no application. The imposition attempted will be apparent, and the fraud—so far as it is a fraud—will not require to be presumed, but will stand proved.

This rule, although not distinctly announced, by any of our courts, has much to support it, in several authorities. Judges would seem to have had a rule of this kind in view, when they have construed patents under the guidance of the maxim, *ut res magis valeat, quam pereat.* The use of this maxim, which has often furnished the spirit of construction in particular cases, implies that the claim is to be supported, if it can be done without a violation of principle. But the rule has been distinctly applied, in England, by the Court of Common Pleas, that the patentee is not to be presumed to have intended to claim things which he must have known to be in common use, although in describing his invention, he has not expressly excluded them from the claim. There are also cases, in this country, where it has been held not to be necessary to use words of exclusion, in reference to details, where it appears from the whole description of the invention that the new is capable of being distinguished from the old.

The same rule, in cases of doubt, should be applied to

the construction, where the question is, whether the patentee has claimed as much as he has invented; that is to say, the specification should be so construed, as to make the claim coextensive with the actual invention, if this can be done consistently with principle.

But beyond this rule, it is not necessary or wise to go, in the construction of patents. By giving the patentee the benefit of this presumption, in cases of doubt, the doubt will be removed, and the patent will remain good for the real invention. But where there is no room for doubt, and no occasion for the application of the rule, but the claim is manifestly broader or narrower than the real invention, there can be no hesitation about the judgment to be pronounced, especially since the provisions of our law, by which a patent may remain valid *pro tanto*, after the real invention of the party has been judicially ascertained.

PART I.

THE SUBJECT-MATTER OF PATENTS,

AND THE

PARTIES ENTITLED THERETO.

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CHAPTER I.

NOVELTY AND UTILITY.

§ 1. The Patent Act now in force in this country requires that the subject of every patent should be "new and useful," whether it be an art, machine, manufacture, or composition of matter, or an improvement on any of these things.[1] The inquiry that meets us on the threshold is, what constitutes novelty, and what constitutes utility, in the sense of the statute?

§ 2. It is one of the first principles of patent law, that a patent cannot be obtained for a mere philosophical or abstract theory, be the subject what it may: it can only be for theory reduced to practice. If, therefore, the subject of the patent be an art, it must be an art actually put in practice and unknown before; — if it be a machine, it must be substantially new in its structure and mode of operation, and not merely changed in form or in the proportion of its parts:[2] — if it be a manufacture, or composition of matter, it must be something actually

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[1] Act of July 4, 1836, c. 357, § 6.

[2] Lowell *v.* Lewis, 1 Mason's R. 182, 187; Wyeth *v.* Stone, 1 Story's R. 273, 279.

made and substantially different from anything the making of which was before known.[1]

§ 3. In machinery, it is not necessary, in order to defeat a patent, that a machine should have existed in every respect similar to that patented; for a mere change of former proportions will not support a patent. If a patent is claimed for a whole machine, it must in substance be a new machine; that is, it must be a new mode, method, or application of mechanism, to produce some new effect, or to produce an old effect in a new way.[2] In cases of difficulty, where the machinery is complicated, and many of the elements employed are powers and instruments of motion long known, the test, which is to determine the boundaries between what was known and used before, and what is new, is, to observe what is new in the mode of operation. If the principles of a machine, that is, the peculiar device or manner of producing the given effect, be new, although the effect itself be old, a patent may be claimed for the machine.[3]

§ 4. On the other hand, the mere purpose, or effect of a machine, however novel, can furnish no ground for a valid patent, unless the machine itself, the instrument by which the purpose is effected, is substantially new. The application of what is old to a new purpose is not patentable.[4]

§ 5. It is necessary, however, to consider somewhat in detail what amount of invention is essential to support a patent.

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[1] Ryan *v.* Goodwin, 3 Sumner's R. 518.

[2] Woodcock *v.* Parker, 1 Gallison's R. 438, 440; Whittemore *v.* Cutter, Ibid. 480. If new effects are produced by an old machine in its unaltered state, no patent can be legally supported, for it is a patent for a legal effect only. Ibid.

[3] Whitemore *v.* Cutter, 1 Gallis. 480, 481.

[4] Winans *v.* Boston and Providence Railroad, 2 Story's R. 412; Bean *v.* Smallwood, Ibid. 408, 411.

§ 6. It is often laid down, that provided the invention is substantially new, it is of no consequence whether a great or small amount of thought, ingenuity, skill, labor, or experiment has been expended, or whether it was discovered by mere accident.[1]

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[1] In Crane *v.* Price, Webster's Pat. Cas. 411, Sir. N. C. Tindall, C. J. said "But in point of law, the labor of thought or experiment, and the expenditure of money, are not the essential grounds of consideration on which the question, whether the invention is or is not the subject-matter of a patent ought to depend. For if the invention be new and useful to the public, it is not material whether it be the result of long experiment and profound search, or whether by some sudden and lucky thought, or mere accidental discovery." So also in Earle *v.* Sawyer, 4 Mas. 6, Mr. Justice Story said: "The thing to be patented is not a mere elementary principle, or intellectual discovery, but a principle put in practice and applied to some art, machine, manufacture or composition of matter. It must be *new*, and not known or used before the application; that is, the party must have found out, created, or constructed some art, machine, &c., or improvement on some art, machine, &c., which had not been previously found out, created or constructed by any other person. It is of no consequence whether the thing be simple or complicated; whether it be by accident, or by long, laborious thought, or by an instantaneous flash of the mind that it is first done. The law looks to the fact, and not to the process by which it is accomplished. It gives the first inventor or discoverer of the thing the exclusive right, and asks nothing as to the mode or extent of the application of his genius to conceive or execute it. It must also be useful, that is, it must not be noxious or mischievous, but capable of being applied to good purposes; and perhaps it may also be a just interpretation of the law, that it meant to exclude things absolutely frivolous and foolish. But the degree of positive utility, is less important, in the eye of the law, than some other things, though in regard to the inventor, as a measure of the value of the invention, it is of the highest importance.

The first question then to be asked, in cases of this nature, is, whether the thing has been done before. In case of a machine, whether it has been substantially constructed before; in case of an improvement of a machine, whether that improvement has ever been applied to such a machine before, or whether it is substantially a new combination. If it is *new*, if it is *useful*, if it has *not been known* or *used* before, it constitutes an invention, within the very terms of the act, and, in my judgment, within the very sense and intendment of the legislature. I am utterly at a loss to give any other interpretation of the act; and, indeed, in the very attempt to make that more clear which is expressed in unambiguous terms in the law itself, there is danger of creating an artificial obscurity."

Still it is sometimes necessary to ascertain what bearing the amount of thought, design, or ingenuity that may have been expended, has upon the question of novelty. It may not be necessary that there should be positive evidence of design, thought, or ingenuity; but if it is necessary that the possibility of these qualities having been exercised should not be excluded by the character of the supposed invention, then such possibility becomes one test of the sufficiency of invention. While the law does not look to the mental process by which the invention has been reached, but to the result, it may still require that the result should be such as not to exclude the possibility of some skill or ingenuity having been exercised. It requires this, because it requires that the subject-matter of a patent should be something that has not substantially existed before. While such a thing may have been produced by mere accident, and not by design, yet it may also have been the fruit of design and study. If, however, the character of the alleged invention be such, that no design or study could by possibility have been exercised in its production, then its character is strong proof that it does not differ substantially from what had been produced before. We must look, therefore, to the character and purposes of the invention, and not to the actual process by which it was produced, in order to see that the possibility of thought, design, ingenuity, or labor having been exercised, is not excluded.

§ 7. Thus, if an alleged invention is absolutely frivolous and foolish, though it may have the element of novelty, in one sense, it is not the subject of a patent. So, too, mere colorable variations, or slight and unimportant changes, will not support a patent; as the immersion of cloth in a steam bath, with the view of damping it, instead of immersing it in hot water;[1] and the substitution of steam as the means of heating hollow rollers over

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[1] Rex *v.* Fussell, cited in Webster on the Subject-Matter of Patents, p. 26.

which wool was to be passed, instead of heating them by the insertion of hot iron bars.[1] In such cases, if the consequences resulting from the change are unimportant, and the change consists merely in the employment of an obvious substitute, the discovery and application of which could not have involved the exercise of the inventive faculty, in any considerable degree, then the change is treated as merely a colorable variation, or a double use, and not as a substantive invention.[2]

§ 8. On the other hand, the utility of the change, and the consequences resulting therefrom, may be such, as to show that the inventive faculty may have been at work; and in such cases, though, in point of fact, the change was the result of accident, its utility and importance will afford the requisite test of the amount of invention involved in the change. Thus the mere substitution of one metal for another, in a particular manufacture, might be the subject of a patent, if the new article were better, more useful, or cheaper than the old.[3] In Crane's patent the invention consisted in the use of anthracite and hot air-blast, in the manufacture of iron, in the place of bituminous

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[1] Rex *v.* Lister, cited in Webster on the Subject-Matter of Patents, p. 26.

[2] The illustrations put by Lord Abinger, in Losh *v.* Hague, Webster's Pat. Cas. 208, present the distinctions here taken in an amusing form. "If a Surgeon had gone to a Mercer, and said, 'I see how well your scissors cut,' and he said 'I can apply them instead of a lancet, by putting a knob at the end,' that would be quite a different thing, and he might get a patent for that; but it would be a very extraordinary thing to say, that because all mankind have been accustomed to eat soup with a spoon, that a man could take out a patent because he says you might eat peas with a spoon."

[3] "If the composition of matter now called a silver tea-pot, had existed before the introduction of tea, and been used for making similar infusions from other ingredients, its appropriation or application to making tea, could not have been the subject-matter of a patent, this being the double use of a known thing, as of a medicine celebrated for one disease, to another; but if such a composition of matter were not known, there might have been patents for a silver pot, as well as for the first carthen tea-pot. No one can say that a silver and an earthern pot are the same manufacture." Webster on the Subject-Matter, p. 25, note.

coal and hot air-blast; and the Court of Common Pleas said, "We are of opinion, that if the result produced by such a combination be either a new article, or a better article, or a cheaper article, to the public, than that produced before by the old method, that such a combination is an invention or manufacture intended by the statute, and may well become the subject of a patent."[1] But if the change be immaterial and productive of no beneficial result, so that the end can be attained as well without as with the supposed improvement, it will not support a patent.[2]

§ 9. A concise and lucid *dictum* of Buller, J. presents a capital test of the sufficiency of many inventions: "If there be anything material and new which is an improvement of the trade, that will be sufficient to support a patent."[3] The term "improvement of the trade" was obviously used by the learned judge in the commercial sense, meaning the production of the article as good in quality at a cheaper rate, or better in quality at the same rate, or with both these consequences partially combined.[4] There are many cases where the materiality and novelty of the change can be judged of only by the effect on the result; and this effect is tested by the actual improvement in the process of producing the article, or in the article itself, introduced by the

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[1] Crane *v.* Price, Webs. Pat. Cas. 409. It has been suggested, that if the immersion of cloth in steam, instead of hot water, had been attended with any considerable improvement in the manufacture, the change would have been held a sufficient substantive invention to have supported a patent. Webster on the Subject-Matter, p. 26, note (*t.*)

[2] In Arkwright's case, there was evidence that the filleted cylinder had been used before, both in the way in which he used it, and in another way. Buller, J. said, "If it were in use both ways, that alone is an answer to it. If not, there is another question,—whether the stripe in it makes any material alteration? For if it appears, as some of the witnesses say, to do as well without stripes, and to answer the same purpose, if you suppose the stripes never to have been used before, that is not such an invention as will support the patent." Rex *v.* Arkwright, Webs. Pat. Cas. 72, 73.

[3] Rex *v.* Arkwright, Webs. Pat. Cas. 71.

[4] See Mr. Webster's note on this *dictum*, *ut supra*.

alleged invention. To these cases this test is directly applicable. Thus, in Lord Dudley's patent, the change consisted in the substitution of pit coal for charcoal in the manufacture of iron, and it was new both in the process of manufacture and in the constitution of the iron.[1] In Neilson's patent, the change consisted in blowing the furnace with hot air instead of cold; and in Crane's, the substitution of anthracite as fuel, in combination with the hot blast. Both these processes were great improvements, leading to a cheaper production of iron of as good or a better quality.[2] In Derosne's patent the invention was by the application of charcoal in the filtering of sugar, being a change in the process of manufacture, so as to produce sugar in a way unknown before.[3] In Hall's case, the use of the flame of gas, to singe off the superfluous fibres of lace, effected completely what had been done before in an imperfect manner.[4]

§ 10. In these cases the subject of each invention was not the particular machinery or apparatus by which the new application was to be made available, but it was the new application itself of certain known substances or agents, to produce a particular result, differing either in the process or in the article produced, from the former methods of producing the same thing, and thereby producing a better article, or producing it by superior and cheaper processes. It is obvious that the result, in such cases, furnishes a complete test of the sufficiency of invention; because the importance of the result shows that whether actually exercised or not, the possibility of the exercise of thought, design, ingenuity, and skill is not excluded. The merit is the same, whether the invention was the fruit of accident or design; because the merit consists in having realized the idea and carried it out in practice. But if the idea and the practice involve no beneficial results, superior to what had been before attained, there could have been no scope for the exercise of the inventive

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[1] Webster's Pat. Cas. 14.
[2] Webs. Pat. Cas. 152.
[3] Ibid. 191, 273, 375.
[4] Ibid. 97.

faculty, because the result excludes the supposition of its having been exercised.

§ 11. The same test is also indirectly applicable to another class of cases, where a particular instrument or machine, or combination of machinery is the subject of the patent. As in Arkwright's case, the gist of the objection was, that the alleged new machinery did not serve the purpose of spinning cotton better than the machinery formerly used.[1] And wherever this objection lies to a particular machine or instrument, there cannot be said to be a sufficiency of invention to support a patent.[2] In the case of Brunton's patent, which covered two inventions, the one was for an improvement in the construction of chain cables, and the other for an improvement in the construction of anchors. As to the first invention, chain cables had been formerly made with twisted links, a wrought iron stay being fixed across the middle of the opening of each link to keep it from collapsing. The alleged improvement consisted in making the links with straight sides and circular ends, and in substituting a cast-iron stay with broad ends, adapted to the sides of the link, and embracing them. This combination of the link and the stay was calculated to sustain pressure better than the old form. The court considered the substitution of a broad-headed stay in the link, in place of a pointed stay, under the circumstances, a sufficient invention to support a patent, on account of the utility of the substitution, in connection with the principles to be carried out, viz., the resistance of pressure according to the action of forces.[3]

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[1] The King *v.* Arkwright, Webs. Pat. Cas. 71.

[2] In Morgan *v.* Seeward, 2 M. &. Welsb. 562, Parke, B. said, "On a review of the cases, it may be doubted whether the question of utility is anything more than a compendious mode, introduced in comparatively modern times, of deciding the question whether the patent be void under the statute of monopolies."

[3] Brunton *v.* Hawkes, 4 B. & Ald. 540, 550. Abbott C. J. said "As at present advised, I am inclined to think that the combination of a link of this

§ 12. In respect of the anchor, the invention consisted in making the two flukes in one, with such a thickness of metal in the middle, that a hole might be pierced through it for the insertion of the shank, instead of joining the two flukes in two distinct pieces by welding to the shank. The hole was made conical or bell-mouthed, so that no strain could separate the flukes from the shank, by which means the injury to the iron, from repeated heating, was avoided, only one heating being necessary to unite the end of the shank perfectly with the side of the conical hole. But it appeared at the trial, that the improvement in the anchor was the avoiding the welding, by means well-known and practised in cases extremely similar. It was a case of the simple application of a mode known and practised for a similar purpose in other like cases; and it did not appear that anchors so made were superior to those which had been made before. The court were therefore unanimously of opinion that the patent, in respect of the anchor, could not be sustained.'

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particular form, with the stay of the form which he uses, although the form of the link might have been known before, is so far new and beneficial, as to sustain a patent for that part of the invention, if the patent had been taken out for that alone." Bayley J. said, "The improvement in that respect, as it seems to me, is shortly this; so to apply the link to the force to operate on it, that that force shall operate in one place, namely at the end; and this is produced by having a bar across, which has not the defect of the bar formerly used for similar purposes. The former bars weakened the link, and they were weak themselves, and liable to break, and then if they broke, there might be a pressure in some other part. Now, from having a broad-ended bar instead of a conical one, and having it to lap round the link instead of perforating it, that inconvenience would be avoided; and therefore the present impression on my mind as to this part of the case is, that the patent might be supported."

' Abbott, C. J. said. "The mode of joining the shank to the flukes of the anchor, is to put the end of the shank, which is in the form of a solid cylinder, through the hollow and conical apperture, and it is then made to fill up the hollow and to unite itself with it. Now that is precisely the mode by which the shank of the mushroom anchor is united to the mushroom-top; by which the shank of the adze-anchor is united to its other parts. It is indeed the mode by which the different parts of the common hammer and the pick-axe also, are united together. Now a patent for a machine, each part of which was in use before, but in which the combination of different parts is

§ 13. In like manner, where the substance of an invention con-

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new, and a new result is produced, is good; because there is a novelty in the combination. But here the case is perfectly different; formerly three pieces were united together; the plaintiff only unites two; and, if the union of these two had been effected in a mode unknown before, as applied in any degree to similar purposes, I should have thought it a good ground for a patent; but unfortunately, the mode was well known and long practised. I think that a man cannot be entitled to a patent for uniting two things instead of three, where that union is effected in a mode well known and long practised for a similar purpose. It seems to me therefore, that there is no novelty in that part of the patent as affects the anchor; and, if the patent had been taken out for that alone, I should have had no hesitation in declaring that it was bad." Bayley J. said, "As to the ship's anchor, in substance the patent is, for making in one entire piece, that which was formerly made in two. The two flukes of the anchor used to consist of distinct pieces of iron fastened to the shank by welding. In the present form the flukes are in one piece, and, instead of welding them to the shank, a hole is made in the centre, and the shank introduced through the hole. Could there be a patent for making in one entire piece, what before had been made in two pieces? I think not, but if it could, I think that still this would not be new. In the mushroom and the adze anchors, the shank is introduced into the anchor by a hole in the centre of a solid piece; and in reality the adze anchor is an anchor with one fluke, and the double-fluke anchor is an anchor with two flukes. After having had a one-fluked anchor, could you have a patent for a double-fluked anchor? I doubt it very much. After the analogies alluded to in argument, of the hammer and pickaxe, I do not think that the mere introducing the shank of the anchor, which I may call the handle, in so similar a mode, is an invention for which a patent can be sustained. It is said in this case that the mushroom anchor and adze anchor, are not ships' anchors, but mooring anchors. I think they are ships' anchors; they are not indeed such anchors as ships carry with them for the purpose of bringing the ship up; but if the ship is required to be stationary, at a particular place, then the common mode of making it stationary, is by the mushroom anchor. So the mode adopted to bring a ship, containing a floating light, to an anchor, is by mooring her to one of these mushroom anchors. That is the description of anchor for a hold-fast to the ship. The analogy between the case of the mushroom anchor and of the adze anchor, is so close to that of the present anchor, that it does not appear to me that this discovery can be considered so far new, as to be the proper ground of a patent, in reality it is nothing more than making in one piece, what before was made in two, and introducing into this kind of anchor, the shank, in the way a handle is introduced into a hammer or pickaxe." Best J. said, "Then as to the anchor, the invention claimed is, that he avoids

sisted in spinning with a much less distance between the re-

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the welding; but that certainly is not new, because that has been done before in the case of the mushroom and adze anchor, the pickaxe and the common hammer. It is said, however, that his invention consists in the application of that which was known before, to a new subject-matter: viz., that he had, for the first time, applied to the manufacturing of anchors a mode in which welding was avoided, which, however, had been long practised, in other instances to which I have before alluded; but he does not state as the ground upon which he had applied for his patent, nor state in the specification that it being known that the process of welding weakens the anchor, he had first applied to an anchor, a mode long practised in the manufacture of other instruments, viz., of making the two flukes of one piece instead of two. If he had so described his process, the question would then arise whether that would have been a good ground for a patent. I incline to think however, that it having been long known that welding may be avoided in instruments of a similar form, the application of that practice for the first time to a ship's anchor, cannot be considered a new invention, and therefore that it is not the ground of a patent." Mr. Webster remarks upon this case, "The judges were unanimous in their opinion that the patent, in respect of the improvements in the anchor, could not be supported; that the application of a mode well known, and generally used in several of a class of cases, to one particular case of that class, did not constitute some manner of new manufacture, within the meaning of the statute. If the sufficiency be judged of, only from the invention which the results themselves, the cable and the anchor exhibit, the substitution of a conical end to the shaft, and of a conical hole in the piece constituting the two arms, whereby the pieces were supposed to be more securely united, is as great a change as the substitution of a broad-headed for a pointed stay across the link. And yet there can be no doubt that the invention in the cable, was of a much higher order than in the anchor. The improvement in the cable, was the carrying out into practice, certain important principles respecting the action of forces, by the substitution of a broad headed for the pointed stay, in a link of a particular form. The improvement in the anchor, was the avoiding the welding, by means well known, and practised in cases extremely similar. There was originality of idea in the application of the broad-headed stay, as subsidiary to the principles for the improvement of the chain cable, as laid down in the specification, but there was no originality of idea or of method, in avoiding the welding, this being borrowed from cases which would obviously and immediately present themselves.

It should also be remarked, with the view of pointing out whatever may have contributed to the subtle distinctions which were drawn in this case, that evidence of the great superiority of the cable was given at the trial, but

taining and drawing rollers, than had been before practised, the court held that spinning at a particular distance did not constitute a new manufacture, it having been the previous practice to spin at variable distances.[1]

§ 14. It appears then, according to the English authorities, that the amount of invention may be estimated from the result, although not capable of being directly estimated on a view of the invention itself.[2]

§ 15. The utility of the change is the test to be applied for this purpose. As there cannot be a decidedly useful new result, without some degree of invention in producing the change which effects that result, when a real utility is seen to exist, a sufficiency of invention may be presumed. And it is said, that

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nothing appears to have been said respecting the anchor. And this has been confirmed by the result, for the cable is in constant and general use, but anchors are made as before the patent." Webster on the Subject-Matter, &c. p. 34.

[1] Kay *v.* Marshall, Webs. Pat. Cas. 1 M. & Cr. 373.

[2] Mr. Webster thus sums up the general doctrine: "But though the amount of invention, and the consequent sufficiency of a change to support a patent, cannot be directly estimated or ascertained, they may be estimated and ascertained from the result; and with this view, two things have to be considered, namely, the nature of the change, and its consequences. The change may be considerable, that is, may of itself exhibit traces of thought, skill and design; the consequences produced thereby may be important and considerable, or unimportant and inconsiderable; in the former case, both the means and the result will be new, and there will be a sufficiency of invention. These four cases, the only cases which can occur, are all included in the following general proposition and practical test, that whenever the change and its consequences taken together, and viewed as a sum, are considerable, there must be a sufficiency of invention to support a patent. Thus, when the change, however minute, leads to consequences and results of the greatest practical utility, as in the case of Dudley's, Crane's, Hall's, and Daniell's patents, the above condition is satisfied; but if the consequence, as in the case of Fussell's patent, be inconsiderable, the change also being inconsiderable, and such as would most readily suggest itself to any one, the condition is not fulfilled, and the invention is not sufficient to support a patent." Webster on the Subject-Matter, &c. p. 29, 30.

whenever utility is proved to exist in a very great degree, a sufficiency of invention to support a patent must be presumed.[1]

§ 16. The question now recurs, whether the same general doctrine as to the sufficiency of an invention to support a patent be not applicable under our law. Our statute requires that the subject of a patent should be "new and useful." The word "useful" is not supposed to be used, for the purpose of establishing general utility as the test of a sufficiency of invention to support a patent. It had been held, upon the use of the same word in the same connection in the old patent act of 1793, that it was used merely in contradistinction to what is frivolous or mischievous to society. This term was held to be satisfied, if the alleged invention was capable of use, and was not injurious to the well-being, good policy or sound morals of society.[2]

§ 17. But the subject of a patent must not only be "useful," in this sense, that is, capable of use and not mischievous, but it must also be a "new" art, machine, manufacture, or composition of matter, or "a new improvement" upon one of these things, "discovered or invented" by the patentee, and "not known or used by others" before. It is obvious, therefore, that the subject-matter of a patent must be something substantially different from anything that has been known or used before; and this substantial difference, in all cases where analogous or similar things have been previously known or used, must be the measure of a sufficiency of invention to support the particular patent.[3]

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[1] Webster on the Subject-Matter, &c. p. 30; Webster's Pat. Cas. p. 71, note (*e.*)

[2] Lowell *v.* Lewis, 1 Mas. 186; Bedford *v.* Hunt, Ibid. 303; Kneass *v.* Schuylkill Bank, 4 Wash. 9, 12.

[3] Mr. Phillips has pointed out the provision in the act of 1793, "that simply changing the form or the proportions of any machine or composition of matter in any degree, shall not be deemed a discovery;" and he remarks that this construction would undoubtedly have been put upon the law with-

§ 18. Our courts have, in truth, without using the same terms, applied the same tests of the sufficiency of invention, which the English authorities exhibit, in determining whether alleged inventions of various kinds possess the necessary element of novelty. That is to say, in determining this question, the character of the result, and not the apparent amount of skill, ingenuity or thought exercised, has been examined; and if the result has been substantially different from what had been effected before, the invention has been pronounced entitled to a patent; otherwise, the patent has failed.[1]

§ 19. Thus, where the patent was for an improvement in *copperplate* printing of bank notes, by printing copperplate on both sides of the note, or copperplate on one side, and letter-press on the other, or letter-press on both sides, *as an additional security against counterfeiting*; and the defendants had used steel plate printing; the question was, whether "copperplate printing" included "steel plate printing." The plaintiff's counsel contended, that even if copperplate did not include steel plate printing, still the use of the latter by the defendants, applied to bank notes, to produce the effect stated in the patent, was a mere invasion and virtually an infringement. Washington J. instructed the jury, that if the use of steel plates was an *improvement* upon printing from copperplates, for which a patent might have been obtained by the inventor, the use of steel plates by the defendants could with no propriety be considered as an infringement of the plaintiff's right, unless it appeared that they had also used the plaintiff's improvement.[2]

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out any such express exception. He gives the same place in our law to the doctrine of sufficiency of invention, that it occupies in the English law. See Phillips on Patents, 125, 126, 127.

[1] The application of these tests is most frequently found in cases, not where insufficiency of invention has been expressly the ground of defence, but where the question has been whether the patent did not claim something that was not new.

[2] Kneass *v.* The Schuylkill Bank, 4 Wash. 9, 11.

§ 20. This is in substance the test applied by Mr. Justice Buller, of "anything material and new, that is an improvement of the trade."[1] If the process of printing by steel plates was an improvement in the manufacture of notes, upon the process of printing by copperplates, so as to be a benefit to the trade of manufacturing notes, it would have been a substantive invention, and therefore not an infringement upon the plaintiff's patent, if standing alone.

§ 21. So too, upon the clause in the former statute, "that simply changing the form or proportion of any machine, shall not be deemed a discovery," Mr. Chief Justice Marshall, held that the word "simply" was of great importance; that it was not every change of form or proportion which was declared to be no discovery, but that which was *simply* a change of form or proportion, and nothing more. If by changing the form and proportion, a new effect is produced, there is not simply a change of form and proportion, but a change of principle also. The question will be therefore whether the change has produced a different effect.[2]

§ 22. In like manner, Mr. Justice Livingston decided that a patent was invalid, upon substantially the same test as that of Mr. Justice Buller. The patent was for an alleged invention in folding and putting up thread and floss cotton, in a manner different from the ordinary mode, so that it would sell quicker and for a higher price, than the same cotton put up in the common way. The article itself was imported and underwent no change. The whole of the improvement consisted in putting up the skeins or hanks in a convenient quantity for retailing, with a sealed wrapper, and a label containing the number and description of the article. The court declared that the inven-

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[1] Cited *ante*, § 9.

[2] Davis *v.* Palmer, 2 Brock. 298, 310. See also Pettibone *v.* Derringer, 4 Wash. 218, 219.

tion, upon the patentee's own showing, was frivolous; that it was in no way beneficial to the public, not making the article itself any better, or altering its quality in any way. In other words, it was no "improvement of the trade" of making the article sold, but it was a mere improvement in the art of selling it, by which the retailer could get a higher price for the same article than could be obtained by putting it up without the label.[1]

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[1] Langdon *v.* DeGroot, 1 Paine's C. C. R. 203. The learned judge said, "The invention is for folding the thread and floss cotton in a manner a little different from the ordinary mode, in which form the cotton will sell quicker and higher by twenty-five per cent. than the same cotton put up in the common way. The cotton thus folded is imported from the factory of Holt, in England. The article itself undergoes no change; and the whole of the improvement, for it is a patent for an improvement, consists in putting up skeins of it, perhaps of the same size in which they are imported, decorated with a label and wrapper; thus rendering their appearance somewhat more attractive, and inducing the unwary, not only to give it a preference to other cotton of the same fabric, quality, and texture, but to pay an extravagant premium for it. When stripped of these appendages, which must be done before it is used, the cotton is no better in any one respect than that of Holt's retailed in the way put up by him. All this came out on the plaintiff's own testimony.

Now, that such a contrivance — for with what propriety can it be termed an useful art within the meaning of the constitution? — may be beneficial to a patentee, if he can exclude from the market all other retailers of the very same article, will not be denied; and if to protect the interest of a patentee, however frivolous, useless or deceptive his invention may be, were the sole object of the law, it must be admitted that the plaintiff has made out a satisfactory title to his patent.

But if the utility of an invention is also to be tested by the advantages which the public are to derive from it, it is not perceived how this part of his title is in any way whatever established. So the cotton manufactured by himself, which is put up in this way. The very label declares it to be that of another man. So anything done to alter its texture or to render it more portable, or more convenient for use. Nothing of this kind is pretended. Does the consumer get it for less than in its imported condition? The only ground on which the expectation of a recovery is built is, that he pays an enormous additional price, for which he literally receives no consideration.

It is said that many ornamental things are bought of no intrinsic value, to gratify the whim, taste or extravagance of a purchaser, and that for many of

§ 23. So, too, where the question was whether, in a patent for a machine for making wool cards, the patentee had not claimed what had been substantially done before, his claim being for the whole machine, which comprehended several distinct operations or stages in the manufacture; Mr. Justice Story said the question was, whether either of these effects had been produced in the machines formerly in use by a combination of machinery or mode of operation substantially the same as in the machine of the patentee. That it would not be sufficient to protect the plaintiff's patent — it being for the whole machine — that his specific machine, with all its various combinations and effects, did not exist before; because, if the different effects embraced in it were all produced by the same application of machinery, in separate parts, and he merely combined them, or added a new effect, such combination would not sustain his patent for the whole machine;[1] that is to say, without looking at the appa-

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these articles patents are obtained. This may be so; but in such cases there is no deception, no false appearances; and the article is bought to be used with all its decorations and ornaments which may have been the principal inducements to the purchase, and which will last as long as the article itself. In this the sight or pride of the party is gratified. But here it is the cotton alone which it is intended to buy, and the little label and wrapper appended to it, and which constitute the whole of the improvement, however showy, are stripped off and thrown away before it can be used. And when that is done, which may be at the very moment of its purchase, the cotton is no better, whatever the buyer at the time may think, than when it first left the factory.

When Congress shall pass a law, if they have a right so to do, to encourage discoveries, by which an article, without any amelioration of it, may be put off for a great deal more than it is worth and is actually selling for, it will be time enough for courts to extend their protection to such inventions, among which this may be very fairly classed."

[1] Whittemore *v.* Cutter, 1 Gallis. 478. In this case, the learned judge said, "It is difficult to define the exact cases, when the whole machine may be deemed a new invention, and when only an improvement of an old machine; the cases often approach very near to each other. In the present improved state of machinery, it is almost impracticable not to employ the same elements of motion, and in some particulars, the same manner of operation, to produce any new effect. Wheels, with their known modes of opera-

rent amount of skill or invention involved in bringing these sev-

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tion, and known combinations, must be of very extensive employment in a great variety of new machines; and if they could not, in the new invention, be included in the patent, no patent could exist for a whole machine embracing such mechanical powers.

Where a specific machine already exists, producing certain effects, if a mere addition is made to such machine, *to produce the same effects* in a better manner, a patent cannot be taken for the whole machine, but for the improvement only. The case of a watch is a familiar instance. The inventor of the patent lever, without doubt, added a very useful improvement to it; but his right to a patent could not be more extensive than his invention. The patent could not cover the whole machine as improved, but barely the actual improvement. The same illustration might be drawn from the steam engine, so much improved by Messrs. Watt and Boulton. In like manner, if to an old machine some new combinations be added, to produce *new effects*, the right to a patent is limited to the new combinations. A patent can in no case be for an effect only, but for an effect produced by a given manner, or by a peculiar operation. For instance, no patent can be obtained for the admeasurement of time, or the expansive operations of steam; but only for a new mode or new application of machinery to produce these effects; and therefore, if new effects are produced by an old machine in its unaltered state, I apprehend that no patent can be legally supported, for it is a patent for an effect only.

On the other hand, if *well known effects* are produced by machinery in all its combinations *entirely new*, a patent may be claimed for the whole machine. So, if the principles of the machine are new, either to produce a new or an old effect, the inventor may well entitle himself to the exclusive right of the whole machine. By the principles of a machine, (as these words are used in the statute) is not meant the original elementary principles of motion, which philosophy and science have discovered, but the *modus operandi*, the peculiar device or manner of producing any given effect. The expansive powers of steam, and the mechanical powers of wheels, have been understood for many ages; yet a machine may well employ either the one or the other, and yet be so entirely new, in its mode of applying these elements, as to entitle the party to a patent for his whole combination. The intrinsic difficulty is to ascertain, in complicated cases like the present, the exact boundaries between what was known and used before, and what is new, in the *mode of operation*.

The present machine is to make cotton and woollen cards. These were not only made before the present patent, by machinery, but also by machinery which, at different times, exhibited very different stages of improvement. The gradual progress of the invention, from the first rude attempts

eral modes of operation into one machine, which was not the invention claimed, if the result accomplished thereby did not differ substantially, in respect to the processes embraced in it, from what had been done before in separate machines, the subject-matter claimed as the invention was not new.

§ 24. On the other hand, where the patent claimed, as the invention of the party, a new and useful improvement in the making of friction matches, by means of a new compound, and it was said that the ingredients had been used before in the making of matches, the court said that the true question was, whether the materials had been used before in the same combination, and if

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to the present extraordinary perfection, from the slight combination of simple principles to the present wonderful combinations, in ingenuity and intricacy scarcely surpassed in the world, has been minutely traced by the witnesses on the stand.

The jury, then, are to decide whether the principles of Mr. Whittemore's machine are altogether new, or whether his machine be an improvement only on those which have been in use before his invention. I have before observed that the principles are the *mode of operation*. If the same effects are produced by two machines by the same mode of operation, the principles of each are the same. If the same effects are produced but by a combination of machinery operating substantially in a different manner, the principles are different.

The great stages, (if I may so say) in making the cards by Whittemore's machine, which admit of a separate and distinct operation in the machinery, are, 1. The forming and bending the wire. 2. The pricking the leather. 3. The sticking the wire into the leather; and, 4. The crooking the wire after its insertion. Were either of these effects produced in the machines formerly in use by a combination of machinery, or mode of operation, substantially the same as in this machine? If so, then clearly his patent could only be for an improvement, and of course it is void; if not, then his patent is free from any objection on the ground of being broader than his invention. It will not be sufficient, to protect the plaintiff's patent, that this specific machine, with all its various combinations and effects, did not exist before; for if the different effects were all produced by the *same application* of machinery, in separate parts, and he merely combined them together, or added a new effect, such combination would not sustain the present patent, any more than the artist, who added the second hand or repeater to a watch, could have been entitled to a patent of the whole watch."

not, that the combination was patentable, however apparently simple it might be. That is to say, if the result at which the inventor had arrived, the production of a friction match by a particular combination of materials, was new, there was a sufficiency of invention, without looking at the apparent facility or difficulty of accomplishing it.[1]

§ 25. So, too, where it was said, in the defence, that a machine for cutting ice was but an application of an old invention to a new purpose, it being likened to the common carpenter's plough, the court distinguished the machine from everything that had been made before, by pointing out that such a conbination of apparatus had not been known before.[2]

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[1] Ryan *v.* Goodwin, 3 Sumner's R. 514, 518. In this case, Mr. Justice Story said, "It is certainly not necessary that every ingredient or, indeed, that any one ingredient used by the patentee in his invention, should be new or unused before for the purpose of making matches. The true question is, whether the combination of materials by the patentee is substantially new. Each of these ingredients may have been in the most extensive and common use, and some of them may have been used for matches, or combined with other materials for other purposes. But if they have never been combined together in the manner stated in the patent, but the combination is new, then, I take it, the invention of the combination is patentable. So far as the evidence goes, it does not appear to me that any such combination was known, or in use before Phillips's invention. But this is a matter of fact, upon which the jury will judge. The combination is apparently very simple; but the simplicity of an invention, so far from being an objection to it, may constitute its great excellence and value. Indeed, to produce a great result by very simple means, before unknown or unthought of, is not unfrequently the peculiar characteristic of the very highest class of minds."

[2] Wyeth *v.* Stone, 1 Story's R. 273, 279. In this case Mr. Justice Story said, "Assuming the patent to be for the machinery described in the specification, and the description of the invention in the specification to be, in point of law, certainly and correctly summed up, (points which will be hereafter considered,) I am of opinion that the invention is substantially new. No such machinery is, in my judgment, established, by the evidence, to have been known or used before. The argument is, that the principal machine, described as the cutter, is well known, and has been often used before for

§ 26. But where an invention was claimed to be a mode by which the back of a rocking-chair could be reclined and fixed at any angle required, by means of a certain apparatus, the patent was declared void, because the same apparatus or machinery had been long in use, and applied, if not to chairs, at least in other machines, to purposes of a similar nature.[1] An examination of the result attained by the plaintiff showed that he had accomplished nothing which had not been done before, but had merely applied an old contrivance to a new purpose.

§ 27. This last case furnishes a clear line of demarkation between invention and a mere application to a new use. It shows that the end, effect or result attained must be new; and that if the same end, effect or result has been attained before, it is not new, and there has been no invention, but merely an application of means before known to produce an effect before known, on a new occasion. The purpose itself, which is to be accomplished, is not patentable; but the adaptation of materials to the execution of the purpose, or the apparatus by which the purpose is accomplished, is the true subject of the patent: and if the same purpose has in other instances been accomplished by the same means, the use of those means on a new occasion

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other purposes, and that this is but an application of an old invention to a new purpose; and it is not, therefore, patentable. It is said that it is, in substance, identical with the common carpenter's plough. I do not think so. In the common carpenter's plough there is no series of chisels fixed in one plane, and the guide is below the level, and the plough is a movable chisel. In the present machine, there are a series of chisels, and they are all fixed. The successive chisels are each below the other, and this is essential to their operation. Such a combination is not shown ever to have been known or used before. It is not, therefore, a new use or application of an old machine. This opinion does not rest upon my own skill and comparison of the machine with the carpenter's plough; but it is fortified and sustained by the testimony of witnesses of great skill, experience, and knowledge in this department of science."

[1] Bean *v.* Smallwood, 2 Story's R. 408, 410.

does not constitute a sufficiency of invention. In other words, the machinery, apparatus, or other means, is not new.[1]

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[1] In the case last cited (Bean *v.* Smallwood) Mr. Justice Story said, "The third and last specification of claim, upon the testimony of Mr. Eddy, which is admitted to be true, is equally unsupportable. He says, that the same apparatus, stated in this last claim, has been long in use, and applied, if not to chairs, at least in other machines, to purposes of a similar nature. If this be so, then the invention is not new, but at most is an old invention, or apparatus, or machinery applied to a new purpose. Now, I take it to be clear, that a machine, or apparatus, or other mechanical contrivance, in order to give the party a claim to a patent therefor, must in itself be substantially new. If it is old and well known, and applied only to a new purpose, that does not make it patentable. A coffee-mill applied for the first time to grind oats, or corn, or mustard, would not give a title to a patent for the machine. A cotton gin, applied without alteration to clean hemp, would not give a title to a patent for the gin as new. A loom to weave cotton yarn, would not, if unaltered, become a patentable machine as a new invention by first applying it to weave woollen yarn. A steam engine, if ordinarily applied to turn a grist mill, would not entitle a party to a patent for it, if it were first applied by him to turn the main wheel of a cotton factory. In short, the machine must be new, not merely the purpose to which it is applied. A purpose is not patentable; but the machinery only, if new, by which it is to be accomplished. In other words, the thing itself which is patented must be new, and not the mere application of it to a new purpose or object." In Huddart *v.* Grimshaw, Webster's Pat. Cas. 86, Lord Ellenborough said, "In inventions of this sort, and every other through the medium of mechanism, there are some materials which are common, and cannot be supposed to be appropriated in the terms of any patent. There are common elementary materials to work with in machinery, but it is the adoption of these materials to any particular purpose that constitutes the invention; and if the application of them be new, if the combination in its nature be essentially new, if it be productive of a new end and beneficial to the public, it is that species of invention which, protected by the King's patent, ought to continue to the person the sole right of vending; but if, prior to the time of his obtaining a patent, any part of that which is of the substance of the invention, has been communicated to the public, in the shape of a specification of any other patent, or is a part of the service of the country, so as to be a known thing, in that case he cannot claim the benefit of his patent." See also Hovey *v.* Stevens, 1 Woodbury and Minot's R., 290, 297, 298, 299, where Mr. Justice Woodbury held it doubtful, whether a change by merely attaching several knives to a cylinder, to be ground, instead of attaching but one, without any difference being shown in

§ 28. The doctrine in relation to utility, being, in this country, that the subject-matter of a patent must not be injurious or mischievous to society, or frivolous or insignificant: it follows that every invention, for which a patent is claimed, must be, to a certain extent, beneficial to the community; it must be capable of use, for some beneficial purpose; but when this is the case, the degree of utility, whether larger or smaller, is not a subject for consideration, in determining whether the invention will support a patent.[1] But it is obvious that the capability of use for some beneficial purpose is a material element, in determining whether there is a sufficiency of invention to support a patent; the force of the word "useful," introduced into the statute in connection with the epithet "new," being to determine whether the subject-matter, upon the whole, is capable of use, for a purpose from which any advantage can be derived to the public. General rules will not decide this question in particular cases, but the circumstances of each case must be carefully examined, under the light of the principles on which general rules are founded.

§ 29. In considering the question of the novelty of an invention, Buller, J., laid down the rule, that when the novelty is disputed, the patentee is bound to offer some evidence of novelty. That is, he must show in what his invention consists, and that he produced the effect proposed by his patent, in the manner specified. Slight evidence of this on his part is sufficient, and it is then incumbent on the party alleging want of novelty to show the defect.[2]

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producing the rotary motion, was a sufficient change in form, or principle, or results, to justify a patent.

[1] Lowell *v.* Lewis, 1 Mas. 182; Bedford *v.* Hunt, Ib. 302; Kneass *v.* The Schuylkill Bank, 4 Wash. 9, 12; 2 Kent's Com. 369; Phillips on Patents, 130–144. Evidence that the invention of the defendant is better than that of the plaintiff, is improper, except to show a substantive difference between the two inventions. Alden *v.* Dewey, 1 Story's R. 336.

[2] Turner *v.* Winter, 1 T. R. 602, 607.

§ 30. Under our law it would seem that the patent itself is *prima facie* evidence of the novelty of the invention. The act of 1836, § 6, requires the applicant to make oath that he verily believes himself to be the original and first inventor or discoverer of the thing, and that he does not know or believe that it was ever before known or used. Mr. Justice Story has held that this oath, on a trial, is evidence in the cause, of a *prima facie* character, and that it is the foundation of the *onus probandi* thrown upon the defendant.[1] The patent recites the oath, and thus the jury have cognizance of it; and as the oath asserts that the patentee was the original and first inventor, it must be evidence of the novelty of the invention, if it is evidence of the fact that the patentee was the inventor.[2]

§ 31. In connection with the subject of novelty, it is further to be remembered, that our statute also requires that the subject-matter of a patent should not have been "known or used by others before the discovery or invention thereof" by the patentee.[3]

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[1] Alden *v.* Dewey, 1 Story's R. 336.

[2] Ibid. See also Stearns *v.* Barrett, 1 Mas. R. 175; Pennock *v.* Dialogue, 4 Wash. R. 538; Dixon *v.* Moyer, Ibid. 68; Phillips on Patents, 407.

[3] Act of 1836, § 6. Upon the former law, the words of which were "not known or used before the application," the Supreme Court of the United States put the construction which has been adopted by Congress in the subsequent statute. "What then is the true meaning of the words 'not known or used before the application?' They cannot mean that the thing invented was not known or used before the application by the inventor himself, for that would be to prohibit him from the only means of obtaining a patent. The use as well as the knowledge of his invention, must be indispensable to enable him to ascertain its competency to the end proposed, as well as to perfect its component parts. The words, then, to have any rational interpretation, must mean, not known or used by others before the application. But how known or used? If it were necessary, as it well might be, to employ others to assist in the original structure or use by the inventor himself; or if before his application for a patent his invention should be pirated by another, or used without his consent, it can hardly be supposed that the legislature had within its contemplation such knowledge or use."

§ 32. The time of the knowledge or use of an invention by others which is to vitiate a patent, is a very important point. In England, such knowledge, obtained at any time and in any mode, before the application for a patent, is sufficient to invalidate it. But in this country, it was settled as the true construction of the act of 1793, which used the words, "not known or used before the application," that these words, taken in connection with other provisions of the statute, meant that the invention should not have been known or used before the discovery by the patentee.[1] This construction was afterwards adopted by congress in the act of 1836, in so many terms.

§ 33. The word "others," though used in the plural in this statute, was used to denote that the use should be by some other person or persons than the patentee; and therefore the prior use by one person other than the patentee is sufficient to show that the patentee was not the first inventor.[2]

"We think then, the true meaning must be, not known or used by the public before the application. And thus construed, there is much reason for the limitation thus imposed by the act. While one great object was, by holding out a reasonable reward to inventors and giving them an exclusive right to their inventions for a limited period, to stimulate the efforts of genius; the main object was 'to promote the progress of science and useful arts;' and this could be done best, by giving the public at large a right to make, construct, use and vend the thing invented, at as early a period as possible, having a due regard to the rights of the inventor. If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should for a long period of years retain the monopoly, and make, and sell his invention publicly, and thus gather the whole profits of it, relying upon his superior skill and knowledge of the structure; and then, and then only, when the danger of competition should force him to secure the exclusive right, he should be allowed to take out a patent, and thus exclude the public from any further use than what should be derived under it during his fourteen years; it would materially retard the progress of science and the useful arts, and give a premium to those who should be least prompt to communicate their discoveries." Pennock *v.* Dialogue, 2 Peters's S. C. R. 18, 19.

[1] Mellus *v.* Silsbee, 4 Mas. R. 108; Treadwell *v.* Bladen, 4 Wash. R. 707.

[2] Reed *v.* Cutter, 1 Story's R. 590. See also *Bedford v.* Hunt, 1 Mas. R. 302.

§ 34. But the question still remains, what constitutes "use" and "knowledge" in the sense of the statute? Does the act simply mean that the mere product of an art or the mere existence of a machine, manufacture or composition of matter, if found in the possession of another, before the invention or discovery by the patentee, shall be sufficient to invalidate a patent? Or does it mean, that the art itself, the mode of constructing the machine, manufacture or composition of matter, must at the time of the invention or discovery by the patentee, be a known thing and in use by others than the patentee, in order to vitiate the patent? This presents the difficult question, what is to be the effect of a perfected invention, once in actual use, and subsequently abandoned or lost, upon the rights of an original inventor? Many arts, formerly known, have been wholly lost; the product of such arts may be still extant; and it is a most important inquiry, whether a new discoverer or inventor of an art of producing the same or similar things, can or cannot obtain a valid patent for his original independent discovery.

§ 35. In England, the statute of monopolies permitted the granting of a patent to "the true and first inventor of such manufacture, which others at the time of making such letters-patent shall not use." Our statute requires that the patentee shall be the "first inventor" of an art, machine, manufacture or composition of matter, not known or used by others before his discovery," &c. There is no very material difference between the English law and our own, therefore, except as to the time of the use by others, which in England, extends down to the issuing of the letters-patent, but with us is confined to the period of the patentee's invention or discovery. Now it is not settled in England, that the prior knowledge of an invention, long lost sight of to the public, will vitiate subsequent letters-patent for the same invention. The doctrine in relation to prior use in England has been recently promulgated, in the House of Lords, as follows: that although the use of an invention may have been discontinued, if it has been once publicly used,

and the recollection of it has not been wholly lost, it will be sufficient to invalidate a subsequent patent.[1] The subject-matter of the patent in this case was machinery; and the judgments delivered by their lordships, who spoke upon the case, seem to have proceeded upon the ground that such prior use of a perfected invention, in case of machinery, negatives the proposition that the patentee was the "first inventor," as also the proposition that others had not previously used the same thing. At the same time, a strong intimation was given, that the prior use of an invention, if abandoned and lost sight of, so as not to be known to the public, presents a different question from an invention which has been merely disused, but the existence of which shows that the public have the knowledge and the means of making the same thing already in their possession.[2]

§ 36. This distinction, if sound, presents two important inquiries: first, whether there is any class of cases, where the mere previous existence of a thing, the art of making which has been lost, negatives the fact that a subsequent discoverer of an art of making the same or a similar thing is the "first inventor" as those words are used in the statute; secondly, whether the use or knowledge intended by the statute, in cases of this kind, means the use, or knowledge of the art of making the thing, or whether it means merely the use of the thing itself, or the knowledge that it exists, without the means of practising the invention

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[1] The Household Company *v.* Neilson, Webs. Pat. Cas. 673, 709, 710, 716.

[2] The Lord Chancellor (Lyndhurst) said, "It must not be understood that your lordships, in the judgment you are about to pronounce, have given any decision upon this state of facts, namely, if an invention had been formerly used and abandoned many years ago, and the whole thing had been lost sight of. That is a state of facts not now before us. Therefore it must not be understood that we have pronounced any opinion whatever upon that state of things. It is possible that an invention may have existed fifty years ago, and may have been entirely lost sight of, and not known to the public. What the effect of this state of things might be it is not necessary for us to pronounce upon." Ib. 717.

itself. Both of these questions may arise, for instance, in reference to an article which has been patented in England, to wit, an encaustic tile, a description of which was well known in the middle ages, but the art of manufacturing which has been lost ;[1] or in reference to such arts as that of staining glass.

§ 37. With regard to the first question, if the words " first inventor " are to be taken in their literal import, and without reference to the character of the subject-matter, whether it furnishes or does not furnish on mere inspection or analysis a knowledge of the means by which it is produced — then it is only necessary in any case to show that the thing itself has existed before in order to negative the claim that the subsequent patentee is the " first inventor." This might be all that would be necessary in cases of machinery, because the machine is a collection of material parts in a certain combination, the existence of which, at any previous time, shows that it cannot have been again invented for the first time. But with regard to the arts and the products of the arts, it may be very different. The same thing may have been produced at one time by one process, now wholly lost sight of, and at another time, by another process, or by the independent discovery of the same process. It can never be known, with certainty, whether the subsequent process of manufacture is the same with the first, which may always have been a secret, and is at any rate, now unknown. The product alone is the same, or similar ; and if the mere existence of the same thing, without the knowledge of the mode by which it was produced, excludes a subsequent independent discoverer of a process of making that thing from being regarded as the " first inventor," a large class of what are really original inventions and inventions " first " as regards the state of knowledge, are excluded from the benefits of the patent law. The difference between inventions or discoveries of this kind, and cases of machinery, is, that in a machine the invention con-

[1] Wright's Patent, Webs. Pat. Cas. 736.

sists in the putting together, in a certain combination, material parts, intended to operate upon each other according to certain laws of motion, to produce a given effect; and this when once done, is done forever, and can only be done upon one principle and plan, that remain always the same as long as the same machine is reproduced; but in the case of a manufacture or product of an art, the invention consists in the process by which the thing itself is produced, which may be invented in one way at one time and in another way at a subsequent time, so that the subsequent inventor may be literally as well as metaphysically the "first inventor" of *his* process of making the thing.

§ 38. Upon principle, therefore, it would seem, that, in regard to some inventions, the phrase "first inventor" ought to receive such a construction, as will allow a patent to the new discoverer of a process of producing a thing, the art of making which has been lost, upon the ground that he is, as far as can be ascertained, the first inventor of his process of making that thing.

§ 39. With regard to the second question which arises under our statute, upon the clauses which provide against the prior use and knowledge of the thing, it may perhaps be considered that those provisions are cumulative upon the previous requisition that the patentee shall be the first inventor. The statute requires that the patentee shall make oath that he verily believes himself to be the original and first inventor, and that he does not know or believe that the thing, art, machine, composition or improvement was ever before known or used;[1] and it provides that the negative of these propositions may be proved in defence against the patent.[2] In the case supposed — that of an art long lost, but of which specimens of the manufacture can be proved to be or to have been in existence — the patent of a subsequent discoverer of an art of making the same or a similar thing,

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[1] Act of 1836, § 6.

[2] Ibid. § 15.

would be *prima facie* evidence that he is the first discoverer of his particular process of making the thing.[1] The negative is then to be shown in defence; and whether this can be shown, by merely producing the thing, without showing the process by which it was formerly made, depends upon the force to be given to the words "use and knowledge." If those words mean merely that the prior use of the thing itself, or the prior knowledge of its existence, is, in all cases, an answer to the allegation of the patentee that he is the first inventor or discoverer, without showing that his process is the same as that by which the thing was formerly produced, then there is no occasion to inquire further. But if, on the contrary, those words are to be taken with reference to the character of the subject-matter, in each case, then it is apparent that there may be cases, where, as in such arts as those above referred to, the invention or discovery is not, strictly speaking, the thing itself, but a process of making that thing. The words of the statute must be taken with separate application to each of the subjects recited as the proper subject-matters of a patent. The language is that "he is the original and first inventor of the art, machine, composition, &c., and that he does not know or believe that the same was ever before known or used;"[2] and in the subsequent

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[1] The only evidence which the plaintiff can add to his patent, on the issue of novelty, is that of persons who were in the way of hearing of the invention not having heard of it before. Upon this point, Sir N. C. Tindall, C. J., said, "You cannot prove a negative strictly. You can only do so by exhausting the affirmative instances of it, by calling persons who have never heard of it or seen it, and the more those persons are in the way of hearing of it or seeing it, if it had existed, the stronger is that exhausting evidence, if I may so call it, in its effect and value with the jury." Cornish *v.* Keene, Webs. Pat. Cas. 509. In Washburn *v.* Gould, 3 Story's R. 122, 142, Mr. Justice Story instructed the jury upon the question of invention, that it was for the defendant to show, beyond a reasonable doubt, that there was a prior invention to the plaintiffs, because the plaintiff has a right to rest upon his patent for his invention till its validity is overthrown. If there was a reasonable doubt as to the priority of invention, the plaintiff was entitled to the benefit of that doubt.

[2] § 6.

clause, the "thing patented" is declared to be subject to the defence that the patentee was *not* "the original and first inventor or discoverer" or that "it" had been described in some public work, or had been in public use.[1] The "thing patented" is the antecedent of "it," and in the case of an art, this may be, not the product itself, but the process of producing it; and where it cannot be shown that the process invented by the patentee has been "known" or "used" before, the mere production in evidence of a similar manufacture produced at a former period by an unknown art, does not negative the allegation that the patentee invented or discovered the art by which he has produced that manufacture.[2]

§ 40. But aside from the question which may possibly arise with reference to this class of discoveries, the expression "first inventor," as used in our statute, means that the patentee must have been the inventor first in point of time before all others. The English law is somewhat different from ours, on this point, for although it is requisite in England that the patentee should be the first inventor, yet the courts have so construed the expression, as to admit of a valid patent in a variety of cases, where the patentee was not absolutely the first person to make or discover the thing; as where it had been made previously, by another person who had concealed it from every one else;[3] and generally in England, the question whether the patentee is the true and first inventor or not, depends on whether he borrowed the invention from a source open to the public.[4] But in this country, these distinctions are rejected; and it is held, under our statutes, that the patentee must have been the first inventor, as against all other persons, whether they have made known

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[1] § 15.

[2] See a learned note on the bearing of the English statute on this question, by Mr. Webster, Pat. Cas. 718, 719, 720.

[3] Dolland's Case, 2 H. Blackst. 470, 487. Davies's Pat. Cas. 172.

[4] Walton *v.* Potter, Webs. Pat. Cas. 592.

their inventions or not.[1] The previous knowledge and actual

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[1] Reed *v.* Cutter, 1 Story's R. 590, 596. In this case Mr. Justice Story said, "Under our patent laws, no person, who is not at once the first as well as the original, inventor, by whom the invention is perfected and put into actual use, is entitled to a patent. A subsequent inventor, although an original inventor, is not entitled to any patent. If the invention is perfected and put into actual use by the first and original inventor, it is of no consequence whether the invention is extensively known or used, or whether the knowledge or use thereof is limited to a few persons, or even to the first inventor himself. It is sufficient, that he is the first inventor, to entitle him to a patent; and no subsequent inventor has a right to deprive him of the right to use his own prior invention. The language of the Patent Act of 1836, ch. 357, § 6, 15, and of the Patent Act of 1837, ch. 45, § 9, fully establish this construction; and, indeed, this has been the habitual, if not invariable construction of all our Patent Acts from the origin of the government. The language of the Act of 1836, ch. 357, § 6, 'not known or used by others before his or their discovery thereof' has never been supposed to vary this construction, or to require that this invention should be known to more than one person, if it has been put into actual, practical use. The Patent Act of 1790 used the language 'not before known or used' without any adjunct (Act of 1790, ch. 34, § 1); and the Act of 1793, used the language 'not known or used before the application,' (Act of 1793, ch. 55, § 1); and the latter act (§ 6) also made it a good matter of defence that the thing patented 'had been in use' anterior to the supposed discovery of the patentee. It early became a question in our Courts, whether a use by the patentee himself, before his application for a patent, would not deprive him of his right to a patent. That question was settled in the negative; and the language of the first section of the act of 1793, ch. 55, was construed to be qualified and limited in its meaning, by that of the sixth section; and the words 'not known or used before the application' in the first section, were held to mean not known or used by the public before the application. The case of *Pennock* v. *Dialogue*, (2 Peters R. 18 to 22,) is a direct authority to this effect. And it was probably in reference to that very decision, that the words 'by others' were added in the Act of 1836, ch. 357, § 6, by way of explanation of the doubt formerly entertained on the subject. The words 'by others' were not designed to denote a plurality of persons, by whom the use should be, but to show that the use should be by some other person or persons, than the patentee. It would be strange indeed, if, because the first inventor would not permit other persons to know his invention, or to use it, he should thereby be deprived of his right to obtain a patent, and it should devolve upon a subsequent inventor merely from his ignorance of any prior invention or prior use; or that a subsequent inventor

application of the thing by any one person, however privately, is sufficient to defeat the patent.[1]

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should be entitled to a patent, notwithstanding a prior knowledge or use of the invention by one person, and yet should be deprived of it by a like knowledge or use of it by two persons. In *Pennock* v. *Dialogue*, (2 Peters's R. 1, 23,) the Supreme Court expressly held, that the sixth section of the Patent Act of 1793, ch. 55, then in force, (and on this point the law has not undergone any alteration,) 'gives the right to the first and true inventor, and to him only; if known or used before his supposed discovery, he is not the first, although he may be the true inventor; and that is the case, to which the clause looks.'

"I am aware of *Dolland's case;* but I do not consider it to be a just exposition of the Patent Law of this country, however correctly it may have been decided under that of England. In that case it seems to have been held, that Dolland was entitled to his patent because he was an inventor of the thing patented, although there was a prior invention thereof by another person, who, however, had kept it a secret, so that the public had no benefit thereof. And perhaps this was not an unjustifiable exposition of the Statute of Monopolies, (Stat. of 21 James I, ch. 3, § 6,) under which patents are granted in England. But the language of our Patent Acts is different. The Patent Act of 1836, ch. 257, (§ 7, 8, 13, 15, 16,) expressly declares, that the applicant for a patent must be the first, as well as an original inventor.

"The passage cited from Mr. Phillips's work on patents, (p. 395,) in the sense in which I understand it, is perfectly accurate. He there expressly states, that the party claiming a patent must be the original and first inventor; and that his right to a patent will not be defeated by proof, that another person had anticipated him in making the invention, unless such person 'was using reasonable diligence in adapting and perfecting the same.' These latter words are copied from the fifteenth section of the Act of 1836, chapter 357, and constitute a qualification of the preceding language of that section; so that an inventor, who has first actually perfected his invention, will not be deemed to have unjustly, or surreptitiously obtained a patent for that, which was in fact first invented by another, unless the latter was at the time using reasonable diligence in adapting and perfecting the same. And this I take to be clearly law; for he is the first inventor in the sense of the act, and entitled to a patent for his invention, who has first perfected and adapted the same to use; and until the invention is so perfected and adapted to use, it is not patentable. An imperfect and incomplete invention, resting in mere theory, or in intellectual notion, or in uncertain experiments, and not actually reduced to practice, and embodied in some distinct machinery, apparatus, manufacture, or composition of matter, is not, and indeed cannot be patentable under our

[1] Ibid.

§ 41. We have already seen, that there are two issues, with respect to novelty; one, whether the patentee is the first inventor; the other, whether the invention, at the time of his application, be new as to public use and exercise. These issues may be involved together, because if the last is negatived, it may be negatived by evidence which shows that the patentee was not the first inventor. But in point of law and fact, these are distinct issues. The patentee may have been the first inventor, and yet he may have allowed the invention to get into public use, and exercise, before his application; or the invention may never have been in public use, and yet the patentee may not be the first inventor, by reason of his having learned it from some one else, or from some published work, or from some other source open to the public.

§ 42. It is an important question of construction, therefore, to determine when a claimant is the first inventor, in the sense of the statute. This depends upon the nature and extent of the knowledge which any other person may have had of the

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Patent Acts; since it is utterly impossible, under such circumstances, to comply with the fundamental requisites of those acts. In a race of diligence between two independent inventors, he who first reduces his invention to a fixed, positive, and practical form would seem to be entitled to a priority of right to a patent therefor. The clause of the fifteenth section, now under consideration, seems to qualify that right, by providing that, in such cases, he who invents first shall have the prior right, if he is using reasonable diligence, in adapting and perfecting the same, although the second inventor has, in fact, first perfected the same, and reduced the same to practice in a positive form. It thus gives full effect to the well known maxim, that he has the better right, who is prior in point of time, namely, in making the discovery or invention. But if, as the argument of the learned counsel insists, the text of Mr. Phillips means to affirm (what, I think, it does not) that he, who is the original and first inventor of an invention, so perfected and reduced to practice, will be deprived of his right to a patent, in favor of a second and subsequent inventor, simply because the first invention was not then known, or used by other persons, than the inventor, or not known or used to such an extent, as to give the public full knowledge of its existence,—I cannot agree to the doctrine; for, in my judgment, our Patent Acts justify no such construction."

subject of the patent; and upon this inquiry, we may, perhaps, usefully follow the light of English authorities as well as our own.

§ 43. It is not sufficient to defeat a patent, already issued, that another person has conceived the possibility of effecting what the patentee has actually accomplished. To constitute a prior invention, the party alleged to have made it, must have proceeded so far as to have entitled himself to a patent, in case he had made an application; or in other words, he must have reduced his idea to practice, and embodied it in some distinct form.[1] It is true, that in a race of diligence between two independent inventors, our law provides for the priority of conception, by allowing the one who first invents to obtain the patent, if he was using reasonable diligence in adapting and perfecting his invention, although a second inventor has, in fact, first perfected the invention, and reduced it to practice.[2] But where a patent has been granted to a patentee, who did not surreptitiously obtain his knowledge from a prior inventor, who was using reasonable diligence to perfect and adapt the invention, in order to defeat it on the ground that the patentee was not the first inventor, some previous inventor must not only have had the idea, but must also have carried the idea into practical operation; for he is entitled to a patent, who, being an original inventor, has first perfected and adapted the invention to actual use.[3]

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[1] Reed *v.* Cutter, 1 Story's R. 590.

[2] Act of 1836, § 15; Reed *v.* Cutter, 1 Story's R. 590.

[3] Reed *v.* Cutter, *ut supra.* Woodcock *v.* Parker, 1 Gallison's R. 438, 439. In Gibson *v.* Brand, Webs. Pat. Cas. 628, Sir N. C. Tindall, C. J., said to the jury, "It is quite clear, that if, on the evidence you have heard, you are satisfied, that this which is alleged to be a discovery by the plaintiffs, had been publicly known and practised in England, there is an end to the validity of the patent. It would not be sufficient to destroy the patent to show, that learned persons in their studies had foreseen, or had found out this discovery, that is afterwards made public, or that a man in his private warehouse had, by various experiments, endeavored to discover it and failed,

§ 44. But when may a prior invention be said to have been perfected and adapted to actual use? Does the law furnish any test by which this question can be answered? In the first place, it is clear, that mere trials and experiments, though continued up to the date of a patent, will not vitiate the grant, if the patentee had no knowledge of those trials and experiments; because the first perfected invention, if original, is entitled to the patent.[1] In the second place, there may often be a very satisfactory test, which will determine whether the proceedings of an alleged prior inventor, were anything more than trials and experiments, by ascertaining whether he at any time, before the date of the patent, abandoned the pursuit of the object at which he was aiming. If he did so, the abandonment has been said to furnish a presumption that his proceedings rested in experiment and trial alone.[2]

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and had given it up. But if you perceive, on the evidence, that the thing which is now sought to be protected by the patent has been used, and for a considerable period, and used so far to the benefit of the public, as to be sold to any body who thought proper to purchase it of those who made it, then it becomes a material question, whether such mode of user is not, in your judgment, a public using of the article, of the process, or of the invention, before the letters-patent were granted, and therefore you will apply the evidence, when you come to it, subject to such an explanation, — not giving a force or efficacy to any attempts that have been made towards the discovery which the plaintiffs set up, but which have failed and been abandoned, and rested indeed only in experiment, but at the same time giving full effect to such evidence as has been brought before you that tends to show that, by other persons, on various occasions, the article has been made, and the process been pursued which is now sought to be protected, and has been sold to such of the public as have thought proper to come forward and purchase."

[1] The Household Company *v.* Neilson, Webs. Pat. Cas. 708.

[2] In the case last cited, Lord Brougham said, "If an invention has not been completed, but if it all rests in experiment and trial, then it is a most material circumstance as a test, whether any given act of a party, other than the invention, was trial or complete invention; it is a most salutary and important test to apply with a view to ascertain that, to see whether he abandoned or continued it. If he abandoned it, if he gave it up altogether, and for twenty or thirty years did nothing, it is a very strong presumption that it was only experimental — not an invention completed. But suppose it was complete,

§ 45. But if, on the contrary, his experiments and trials were continued, or if there is not satisfactory evidence of an abandonment of the object, then it becomes a question of fact, depending on the nature of the proposed invention, the character of the experiments and the results attained, to determine whether the party had really accomplished the same substantial result as that described in the patent.[1]

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and suppose it is admitted not to have been a trial — suppose it is allowed to have been an invention executed, if I may so speak, not merely executory, or not merely in the progress of invention, but an invention completed, then it is one of the greatest errors that can be committed, in point of law, to say with respect to such an invention as that, it signifies one rush whether it was completely abandoned, or whether it was continued to be used down to the very date of the patent. Provided it was invented and publicly used at the time, twenty or thirty years ago, in this case forty years ago, it is perfectly immaterial, not immaterial to the second question, the second condition, namely, whether it was used or not at the time of the granting of the patent, but totally immaterial to the other question, which is equally necessary to be ascertained in the inventor's favor, whether or not he was the first and true inventor? — for he must be the first and true inventor, as well as the only person using it at the time, otherwise he is not entitled to the letters patent." Webs. Pat. Cas. 713. In Jones *v.* Pearce, Webs. Pat. Cas. 124, Patteson, J. instructed the jury as follows: "If on the whole of this evidence, either on the one side or the other, it appeared this wheel, constructed by Mr. Strutt's order in 1814, was a wheel on the same principles, and in substance, the same wheel as the other for which the plaintiff had taken out his patent, and that was used openly in public, so that every body might see it, and had continued to use the same thing up to the time of taking out the patent, undoubtedly then, that would be a ground to say that the plaintiff's invention is not new, and if it is not new, of course his patent is bad, and he cannot recover in this action; but if, on the other hand, you are of opinion that Mr. Strutt's was an experiment, and that he found it did not answer, and ceased to use it altogether, and abandoned it as useless, and nobody else followed it up, and that the plaintiff's invention, which came afterwards, was his own invention, and remedied the defects, if I may so say, although he knew nothing of Mr. Strutt's wheel, he remedied the defects of Mr. Strutt's wheel, then there is no reason for saying the plaintiff's patent is not good; it depends entirely upon what is your opinion upon the evidence with respect to that, because, supposing you are of opinion that it is a new invention of the plaintiff's, the patent is then good; then the only remaining question would be, whether the defendant has or not infringed the patent."

[1] In Galloway *v.* Bleaden, Webs. Pat. Cas. 521, 526, Sir N. C. Tindall,

§ 46. But although the subject of every patent must have been "invented or discovered" by the party claiming to be the inventor or discoverer, still, as suggestions and hints may often have been made use of by a man of the most original genius, in the production of inventions, it becomes necessary to inquire who is to be regarded as the inventor or discoverer, in the sense of being entitled to a patent for the thing invented or discovered.

§ 47. The intellectual production, or that which, when perfected, constitutes the thing invented, differing from all other things by some substantial peculiarity which gives it a distinct character, is what the law means to protect with an exclusive

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C. J., said to the jury, "the question you are to determine is, whether on the evidence the thing itself was complete, so as to be used, or whether only a series of experiments were going on." . . . . . That there had been many experiments made upon the same line, and almost tending, if not entirely, to the same result, is clear from the testimony you have heard, and that these experiments were known to various persons; but if they rested in experiment only, and had not attained the object for which the patent was taken out, mere experiment, afterwards supposed by the parties to be fruitless, and abandoned because they had not brought it to a complete result, that will not prevent a more successful competitor, who may avail himself as far as his predecessors have gone of their discoveries, and add the last link of improvements in bringing it to perfection." So also in Bedford *v.* Hunt, 1 Mas. 302, 305, Mr. Justice Story said, "If it were the mere speculation of a philosopher or a mechanician, which had never been tried by the test of experience, and never put into actual operation by him, the law would not deprive a subsequent inventor, who had employed his labor and his talents in putting it into practice, of the reward due to his ingenuity and enterprise. But if the first inventor reduced his theory to practice, and put his machine or other invention into use, the law never could intend that the greater or less use in which it might be, or the more or less widely the knowledge of its existence might circulate, should constitute the criterion by which to decide upon the validity of any subsequent patent for the same invention. I hold it therefore to be the true interpretation of this part of the statute, that any patent may be defeated by showing, that the thing secured by the patent, had been discovered and put in actual use, prior to the discovery of the patentee, however limited the use or the knowledge of the prior discovery might have been."

privilege. It is clear, therefore, that many suggestions may have been made, or many hints taken from others, without invalidating the claim of a party to be considered as the author of the invention: since it is not the abstract suggestion or inchoate idea, which the law intends to treat as the subject of the patent, but the perfected invention, in which the idea is applied to a practical purpose and made capable of useful operation. There may be a long interval between the first suggestion of an idea, which leads to or forms the germ of a discovery, and the actual production of that discovery, in all its peculiarities, constituting in its perfect state the thing invented. This interval must, in many cases, be occupied by the exercise of inventive power, of the highest description, on the part of him who has taken the first suggestion from another, by bringing it to perfection, or developing and reducing it to practical application; and the extent to which this interval is so occupied will determine whether the person originally suggesting, or the person subsequently applying an idea, is entitled to be regarded as the inventor.

§ 48. Thus it has been held that in order to invalidate a patent, on the ground that the patentee received from another person the suggestion of the invention, it is not enough to show that the naked idea, or bare possibility of accomplishing the object was suggested. On the other hand it is not necessary that the minutiæ of the invention should have been communicated by another person. But it must appear that the invention was substantially communicated to the patentee, so that without more inventive power he could have applied it in practice.[1] So too, it has been held, that although others may have previously had the idea of a machine and made some experiments towards putting it in practice, the person who first brought the machine to perfection and made it capable of useful operation, is the inventor, and is entitled to the patent.[2]

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[1] Alden *v.* Dewey, 1 Story's R. 336.

[2] Washburn *v.* Gould, 3 Story's R. 122, 133. In this case, Mr. Justice

§ 49. The extent to which a person may avail himself of the suggestions or inventive faculties, or manual dexterity of a servant, and afterwards claim to be the inventor, does not perhaps admit of being stated in any precise general proposition. It depends upon the relative situations of the parties, the nature of the employment, and the fact of the employer having planned or conceived the main idea of the invention. The person who suggests the principle of an invention is the inventor; and if this be the servant, the employer cannot claim the invention as the author of it, although he may have taken the servant into his employ for the express purpose.[1] But if the employer con-

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Story said, "The law is, that whoever perfects a machine, is entitled to a patent, and is the real inventor, although others may previously have had the idea, and made some experiments towards putting it in practice. In England the law goes even so far as to grant such an one the patent, although the antecedent experiments of others were known to and used by him in perfecting his machine. The law in this country has not gone quite so far, but I do not mean to say that there would be any difficulty in going to that extent. At any rate, he is the inventor and is entitled to the patent, who first brought the machine to perfection and made it capable of useful operation." See also Pennock *v.* Dialogue, 4 Wash. 578. In Tenant's case, Dav. Pat. Cases, 429, (cited in Hill *v.* Thompson, 8 Taunt. 395,) there was evidence that a chemist had suggested to the patentee the basis of the improvement in question. The patent was declared invalid; but it appears to have been mainly on the ground that the improvement had been in actual use for six years before the patent. See 8 Taunt. 395, and 2 Evans's Statutes, p. 6, note; Webs. Pat. Cas. 125, note.

[1] Minter *v.* Wells, Webs. Pat. Cas. 132. In this case, one of the questions submitted to the jury was, whether the patentee or another person, named Sutton, was the inventor. Alderson, B. instructed the jury as follows: "If Sutton suggested the principle to Mr. Minter, (the patentee,) then he would be the inventor. If on the other hand Mr. Minter suggested the principle to Sutton, and Sutton was assisting him, then Mr. Minter would be the first and true inventor, and Sutton would be a machine, so to speak, which Mr. Minter uses for the purpose of enabling him to carry his original conception into effect." In Arkwright's case, with respect to a particular roller, part of the machinery, the evidence was, that Arkwright had been told of it by one Kay; that, being satisfied of its value, he took Kay for a servant, kept him for two years, employed him to make models, and afterwards claiming it as his invention, made it the foundation of a patent.

ceives the result embraced in the invention, or the general idea of a machine upon a particular principle, and in order to carry his conception into effect, it is necessary to employ manual dexterity, or even inventive skill, in the mechanical details and arrangements requisite for carrying out the original conception, in such cases the employer will be the inventor, and the servant will be a mere instrument, through which he realizes his idea.[1] The adoption by an inventor, of a suggestion made in the course of experiments, of something calculated more easily to carry his conceptions into effect, does not affect the validity of the patent.[2]

The same fact was proved as to a crank, which had been discovered by a person of the name of Hargrave, which also had been adopted by Arkwright. This evidence was fatal to the patentee's claim of originality in respect of both these inventions. The King *v.* Arkwright, Davis's Pat. Cas. 61; Webs. Pat. Cas. 64. See also Hill *v.* Thompson, 8 Taunt. 375, 395; Barker *v.* Harris, Webs. Pat. Cas. 126.

[1] Ibid. See also Bloxam *v.* Elsee, 1 Car. & P. 567; Dav. Pat. Cas. 132. It was objected in this case that parts of the improvements in Foudrinier's paper machine were the inventions of Mr. Doukin, who proved that when he made those improvements he was employed as an engineer, for the purpose of bringing the machine to perfection, and was paid for so doing, and that he was acting as the servant of the inventor of the machine, for the purpose of suggesting those improvements. He did not discover the principle of the machine, nor invent the important movements of it. The patent was not disturbed on that ground. Godson on Patents, 27, 28; Hindmarch on Patents, 25, 26. Upon the same principle, the Court of Common Pleas in England held that a calico-printer is entitled, after having discharged his head color-man, to the book in which that servant has entered the processes for mixing the colors during his service, although many of the processes were the invention of the servant himself. Makepeace *v.* Jackson, 4 Taunt. 770. — Mr. Phillips, in his valuable work on Patents, states the doctrine in regard to suggestions thus: "It is not a ground of defence that the patentee availed himself of the suggestions of another, unless they go to an essential part of the invention:" — p. 419, edition of 1837. But it seems to be capable of a more precise statement.

[2] Allen *v.* Rawson, 1 M. G. & Scott, 551, 574, Tindall, C. J. "The real question is, whether or not the improvements suggested by *Shaw* and by *Milner* were of such a serious and important character as to preclude their adoption by *Williams* as parts of his invention. The rule was granted

§ 50. There may be a class of cases, where the patentee having employed and paid for the inventive faculty of another, may claim and hold a patent for the invention, not as the inventor, but as the assignee of the inventor. But this class of cases belongs to the subject of assignments of patents, and is distinguishable from the general principles which determine who is the actual inventor.

§ 51. With regard to the use of the antecedent experiments of others, Mr. Justice Story has intimated that our law would go as far as the English doctrine, which allows an inventor to know and use the antecedent experiments of others in perfecting his invention.[1] The English law is, that experiment not brought

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simply upon the objection that the patentee had claimed as a part of his invention, the compound apron which was alleged to be the invention of *Shaw*, and the longitudinal guides invented by *Milner*. And the question is, whether, having so claimed these two things, they form any important parts of the invention for which the patent has been obtained. The main object and design of the patentee were the obtaining a long, even and uniform bat, suitable to be made into commercial ends or pieces of cloth. The patentee, in his specification, after describing the double or compound revolving apron, thus refers to that which is called *Shaw's* suggestion: — "As in many manufacturing premises, these two long extended aprons could not be so conveniently used, for want of room, I sometimes extend them backwards and forwards, and even with several aprons, as shown (in the drawings) at figures 6, 7, and 8, or perpendicularly up and down, where only two are required, as shown at figures 9 and 10." This is, obviously, a mere matter of convenience suggested to and adopted by the inventor. It would be difficult to define how far the suggestions of a workman employed in the construction of a machine are to be considered as distinct inventions by him, so as to avoid a patent incorporating them taken out by his employer. Each case must depend upon its own merits. But, when we see that the principle and object of the invention are complete without it, I think it is too much that a suggestion of a workman, employed in the course of the experiments, of something calculated more easily to carry into effect the conceptions of the inventor, should render the whole patent void. It seems to me, that this was a matter much too trivial and too far removed from interference with the principle of the invention, to produce the effect which has been contended for."

[1] Washburn *v.* Gould, *ut supra* note, p. 41, 42.

to completion, or conducted to a full result, will not vitiate the patent of a more successful person in the same line, though he avails himself of the knowledge gained by the experiments of his predecessors.[1]

§ 52. The Statute of 1836 also requires that the subject of the patent should not have been, at the time of the application, in public use or on sale, with the consent or allowance of the patentee, as the inventor or discoverer.[2]

§ 53. The phrase "public use" means use in public, and not use by the public;[3] so that, under this act, if there had

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[1] In Galloway *v.* Bleaden, Webs. Pat. Cas. 525, Sir. N. C. Tindall, C. J. stated the law to be that "a mere experiment, or a mere course of experiments, for the purpose of producing a result which is not brought to its completion, but begins and ends in uncertain experiments — that is not such an invention, as should prevent another person, who is more successful, or pursues with greater industry the chain in the line that has been laid out for him by the preceding inventor, from availing himself of it and having the benefit of it."

[2] Act of 1836, § 6. The law had previously been settled to be that the first inventor cannot acquire a good title to a patent, if he suffers the thing invented to go into public use or be publicly sold for use, before he makes application for a patent. Such voluntary act or acquiescence in the public sale or use, is an abandonment of his right; or rather, creates a disability to comply with the terms and conditions of the law; on which alone the Secretary of State is authorized to grant a patent. Pennock *v.* Dialogue, 2 Peters 16.

[3] "The public use and exercise of an invention means a use in public, not by the public." Per Lord Abinger in Carpenter *v.* Smith, 9 Mees. & Wels. 300. Webs. Pat. Cas. 530, 534. I possess a MS. note by Mr. Justice Story, to the case of Wyeth *v.* Stone, 1 Story's R. 273, referring to this definition of public use with approbation. The use of a lock in such a situation that the public might see it, is a public use and exercise of the invention. Carpenter *v.* Smith, *ut supra.* The manufacture and sale, without secrecy, by a workman, of several dozens of locks, according to a model which is retained, is a public use and exercise of the invention. Ibid. 540. The publicly making and selling an article, though there may be no demand or use for it at the time, will vitiate subsequent letters patent. Losh *v.* Hague, Webs. Pat. Cas. 205. The question of public use is for the jury; as whether

been a use in public by any person, with the consent or allowance of the patentee, the patent will be defeated.

§ 54. But then it is necessary that the machine or other subject of invention should have been completed, and should have been used in public substantially as it was patented, with the consent of the patentee.[1]

§ 55. As the law stood, therefore, prior to the year 1839, an invention might be allowed to be in public use, by the patentee, before his application, in two modes. He might allow of its use in public by an individual, or individuals, or he might allow the whole public to use it, by having abandoned, or dedicated his invention to the public, before his application. In either case, his patent would have been void.

§ 56. With regard to the first mode, where the use had been permitted to an individual, it has been held that such use must have been unlimited in time extent or object. If allowed for a short, or definite period, as an act of kindness, or as a means of continuing experiments and testing the utility of the invention it would not have had the effect of defeating the patent under the act of 1836.[2]

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the instances adduced show a manufacture to have been in public use, or only that various experiments had been made and abandoned. Elliott *v.* Aston Webs. Pat. Cas. 224. Cornish *v.* Keene, Ibid. 519.

[1] Wyeth *v.* Stone, 1 Story's R. 280, 281.

[2] Ibid. Ryan *v.* Goodwin, 3 Sumner's R. 514, 518. In this last case Mr. Justice Story said, "It is clear by our law, whatever it may be by the law of England, that the public use or sale of an invention, in order to deprive the inventor of his right to a patent, must be a public use or sale by others with his knowledge and consent, before his application therefor. If the use or sale is without such knowledge or consent, or if the use be merely experimental to ascertain the value or utility, or success of the invention by putting it in practice, that is not such a use as will deprive the inventor of his title. Our law also requires that the use or sale should not only be with the knowledge and consent of the inventor, but that it should be before his application

§ 57. With regard to the second mode, a dedication or abandonment of the invention to the public, before the application for a patent, it has been said that the circumstances ought to be very clear and cogent, before the court would be justified in adopting a conclusion so subversive of private rights, when the party has subsequently taken out a patent.[1] Still, although the inventor's acts are to be construed liberally, unequivocal evidence that he has dedicated his invention to the public will deprive him of his right, upon the authority of previous decisions as well as that of the recent statute presently to be cited.[2]

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for a patent. A sale or use of it with such knowledge or consent, in the intermediate time between the application for a patent and a grant thereof, has no such effect. It furnishes no foundation to presume. that the inventor means to abandon his invention to the public; and does not, because it is not within the words of our act, create any statute disability to assert his right to a patent."

[1] Wyeth *v.* Stone, *ut supra.*

[2] Mellus *v.* Silsbee, 4 Mas. 111. In this case Mr. Justice Story said, "If the inventor dedicates his invention to the public, he cannot afterwards resume it, or claim an exclusive right in it. It is like the dedication of a public way or other public easement. The question in such cases is a question of fact. Has he so dedicated it? I agree his acts are to be construed liberally; that he is not to be estopped by licensing a few persons to use his invention to ascertain its utility, or by any such acts of peculiar indulgence and use as may fairly consist with the clear intention to hold the exclusive privilege. But if the inventor proclaims his intention to all the world, and suffers it to go into general and public use, without objection; if he asserts no exclusive right for years, with a full knowledge, that the public are led by it to general use, such conduct, in my judgment, amounts to strong proof, that he waives the exclusive right and dedicates the invention to the world. After such conduct, the attempt to regain the exclusive right and secure it by a patent would operate as a fraud upon the public; and would hold out inducements to incur heavy expenses in putting inventions into operation, of which the party might be deprived at the mere will or caprice of the inventor." So also Mr. Justice Washington held, "That if an inventor makes his discovery public, looks on, and permits others freely to use it, without objection, or assertion of claim to the invention, of which the public might take notice, he abandons the inchoate right to the exclusive use of the invention to which a patent would have entitled him, had it been applied for before such use; and we think it makes no difference in the principle that the article

§ 58. Prior to the year 1839, therefore, if the patentee allowed not merely the public use, but even a free individual use of his invention, before he applied for a patent, his patent would be invalid. But by the act of 1839, ch. 88, § 7, this inconvenience was remedied by the enactment, "that every person or corporation who has, or shall have, purchased or constructed any newly invented machine, manufacture or composition of matter, prior to the application by the inventor or discoverer for a patent, shall be held to possess the right to use, and vend to others to be used, the specific machine, manufacture or composition of matter, so made or purchased, without liability therefor to the inventor, or any other person interested in such invention; and no patent shall be held to be invalid by reason of such purchase, sale or use, prior to the application for a patent aforesaid, except on proof of abandonment of such invention to the

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so publicly used, and afterwards patented, was made by a particular individual, who did so by the private permission of the inventor. As long as an inventor keeps to himself the subject of his discovery, the public cannot be injured; and even if it be made public, but accompanied by an assertion of the inventor's claim to the discovery, those who should make, or use the subject of the invention, would at least be put upon their guard. But if the public, with the knowledge, and the tacit consent of the inventor, is permitted to use the invention, without opposition, it is a fraud upon that public, afterwards to take out a patent. It is possible that the inventor may not have intended to give the benefit of his discovery to the public; and may have supposed that, by giving permission to a particular individual to construct for others the thing patented, he could not be presumed to have done so. But it is not a question of intention which is involved in the principle which we have laid down, but of legal inference, resulting from the conduct of the inventor and affecting the interests of the public. It is for the jury to say whether the evidence brought this case within the principle which has been stated." 4 Wash. 544. The question which generally arises on trials is a question of fact, rather than of law, whether the acts or acquiescence of a party furnish, in a given case, satisfactory proof of an abandonment or dedication of the invention to the public. See Pennock *v.* Dialogue, 2 Peters 16. Grant *v.* Raymond, 6 Pet. 248, 249. Shaw *v.* Cooper, 7 Pet. 313 — 323. McClung *v.* Kingsland, 1 Howard 202, 207.

public; or that such purchase, sale or prior use, has been for more than two years prior to such application for a patent."[1]

§ 59. This enactment relieved the patentee from the effect of the former laws, and the construction that had been put upon them by the courts, and put the person, who, by the consent and allowance of the inventor, had had a prior use of the invention on the same footing, as if he had a special license from the inventor to use his invention; and at the same time, the patent is valid, after it is issued, against all persons, except such licensee, who will continue to have the right to use the invention.[2] Inventors may now, therefore, permit the use of their inventions, by individuals, for a period of two years, prior to the application for a patent, and still obtain a valid patent, notwithstanding such use. But if the use thus allowed extends over a period of more than two years prior to the application, or if it amounts to an abandonment of an invention to the public, whether for a longer or a shorter period, the patent will be invalid.

§ 60. But to entitle a person to claim the benefit of this statute, he must be a person who is a purchaser, or who has used the patented invention before the patent was issued, by a license or grant, or by the consent of the inventor, and not be a purchaser under a mere wrong-doer.[3] What will amount to such

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[1] The words "any newly invented machine, manufacture or composition of matter" in this statute, have the same meaning as "invention" or "thing patented." McClurg *v.* Kingsland, *ut supra.*

[2] McClurg *v.* Kingsland, *ut supra.*

[3] Pierson *v.* The Eagle Screw Company, 3 Story's R. 402, 405. In this case Mr. Justice Story said, "For the defendants the argument is, that the Eagle Screw Company had a right to use the machines purchased by them from Read before Crum's patent was obtained, although Crum was the prior and true inventor, and patentee under the 7th section of the Patent Act of 1839, ch. 88; and great reliance is placed upon the case of McClurg *v.* Kingsland, (1 How. S. C. R. 202.) In my opinion, neither the Act of Congress, nor the case of McClurg *v.* Kingsland justifies such a doctrine. Sup-

a license, grant or consent, is well shown in a case where a person employed in the manufactory of another, while receiving wages, made experiments at the expense and in the manufactory of his employer, had his wages increased in consequence of the useful result of the experiment, made the article invented, and permitted his employer to use it, no compensation for its use being paid or demanded, and then obtained a patent; it was held, that such an unmolested and notorious use of the invention, prior to the application for a patent, brought the case within the provisions of the statute.[1]

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posing the argument to be well founded, what would be the legal result? Why, that a mere wrong-doer, who by fraud or artifice, or gross misconduct, had gotten knowledge of the patentee's invention before he could obtain his patent, without any *laches* on his part, could confer upon a purchaser under him — *bona fide* and without notice — a title to the patented machine, which he himself could not exercise or possess. Certainly there is no ground to say, that a person who pirates the invention of any party prior in point of time and right, can make any valid claim thereto against the prior and true inventor. How then can he confer on others a title, which he himself does not possess? Upon general principles, the assignee can ordinarily claim no more than his assignor can lawfully grant.

But it is said, that the 7th section of the Act of 1839, ch. 88, declares, "That every person or corporation, who has or shall have purchased or constructed any newly invented machine, manufacture or composition of matter, prior to the application by the inventor or discoverer for a patent, shall be held to possess the right to use, and vend to others to be used, the specific machine, manufacture or composition of matter, so made or purchased, without liability therefor to the inventor, or any other person interested in the invention; and no patent shall be held to be invalid by reason of such purchase, sale or use, prior to the application for a patent as aforesaid, except on proof of abandonment of such invention to the public, or that such purchase, sale or prior use, has been for more than two years prior to such application for a patent." Certainly, the language in the first clause of this section is very general, not to say loose, in its texture. But if it stood alone, a first interpretation of it might fairly lead to the conclusion, that the purchaser there spoken of was a purchaser, not from a mere wrong-doer, but from the first and true inventor before he had obtained his patent. The language of the clause does not even include the qualification that the purchaser should be a *bonâ fide* purchaser, for a valuable consideration, without notice of the claim or

[1] McClurg *v.* Kingsland, 1 Howard 202.

§ 61. But the further consideration of the subjects of license and abandonment belongs to another part of this treatise.

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title of the inventor, or of any fraud of the vendor upon that claim or title. Yet, surely, it could never have been the intention of this clause, to confer on a fraudulent purchaser, or a purchaser with full notice, a right to use an invention pirated from the original inventor, by wrong. If, on the other hand, we interpret the language to mean a purchaser from the inventor himself, before his application for a patent, the omission of such qualifying words is at once material and consistent with the apparent objects of the section. But the remaining clauses of this section render this interpretation perfectly clear and right. These clauses point solely to the inventor, and demonstrate that the purchaser before spoken of, was a purchaser from the inventor himself. The language is, "and no patent shall be held to be invalid by reason of any such purchase, sale or use, prior to the application for a patent, as aforesaid, except on proof of an abandonment of such invention to the public." Now the inventor, and the inventor alone, is competent to abandon his invention to the public, and no use by the public, except with his knowledge and consent, can be deemed an abandonment of his invention to the public. It is, therefore, put as an exception carved out of the preceding words; and if the purchase, sale or prior use, were from or under the inventor, and with his consent and knowledge, the exception would have its appropriate effect. It is an exception, *ejusdem generis*. The clause would then read, in legal effect thus — the patent shall not be held invalid by reason, that the inventor has sold or allowed his invention to be used prior to the application for a patent, unless he has abandoned it to the public. Then follows the remaining clause: "Or that such purchase, sale or prior use, has been for more than two years prior to such application for a patent;" which also imports another exception, limiting the right to make application for a patent to the period of two years after the inventor has sold or allowed his invention to be used by others. Any other construction of these clauses, would lead to this extraordinary conclusion, that the inventor would be deprived of the benefit of his invention, and his right to a patent without any *laches* or misconduct on his own part, by the mere acts of a wrong-doer, without his knowledge or against his will; and the exceptions, in a practical sense, would become nullities. But construed, as we construe them, and they have a plain, appropriate and satisfactory meaning. This view of the matter is in entire coincidence with the whole theory and enactments of all the other Patent Acts, and with the judicial interpretations which have been constantly put upon them. It has been the uniform doctrine of the courts of the United States, that no fraudulent or wrongful use of an invention, and no public use without the consent or knowledge, or sanction of the inventor, would deprive him of his right to a patent.

§ 62. The novelty required by our law relates not merely to previous inventions made in this country, but to inventions made

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The case of McClurg *v.* Kingsland, (1 How. Sup. Ch. R. 202) properly considered, contains nothing in conflict with this doctrine. The learned judge (Mr. Justice Baldwin) who delivered the opinion of the court, in commenting upon the 7th section of the Act of 1839, said: "The object of this provision is evidently twofold; first, to protect the person, who used the thing patented by having purchased, constructed or used the machine, &c. to which the invention is applied, from any liability to the patentee or his assignee; second, to protect the rights granted to the patentee against any infringement by any other persons." This language is certainly general, but then, in order to understand it correctly, we must apply it to the very case then before the court; and in this view it was perfectly accurate and appropriate. What was that case? It was a case where the patentee, before he obtained his patent, allowed the defendants to use for their own profit, the very improvements invented by him; and indeed, the improvement was invented by the patentee while he was in their employment, and receiving wages from them, and he freely allowed them to use it. Afterwards, the assignee of the patentee brought the suit against the defendants for using the improvement after the patent was granted. The Circuit Court held that the facts justified the jury in presuming, that the defendants used the improvement under a license or privilege originally granted to them by the inventor, and that the facts of the case brought it directly within the 7th section of the Act of 1839. Mr. Justice Baldwin presided in the Circuit Court at the trial, and he also delivered the opinion of the Supreme Court. So that, putting both opinions together on the points in controversy, it is plain, that the learned judge, by the language above stated, meant to affirm no more than that where the invention had, before the patent, been used under a license or grant of the patentee, that license or grant being a purchase or sale, or use with the consent of the patentee, was within the provision of the 7th section of the Patent Act of 1839. It seems to us, that no reasonable objection exists to this doctrine; and it is in conformity to and in illustration of the very doctrine already stated by us as the true meaning of the section.

Indeed, the context immediately following the passage here cited from the opinion of the learned judge, shows this to have been his meaning. In the former part of the opinion, he had endeavored to show that, under the prior Acts of Congress, if the patentee allowed not merely the public use, but even a free individual use of his invention before he obtained a patent, that would deprive him of his right to a patent; and that the 7th section of the Act of 1839, was intended to cure this inconvenience and defect in the law. "This" [section] says the learned judge, "relieved him (the patentee) from the effect of the former laws and their constructions, by this Court, &c., &c.

anywhere in the world. The invention must be absolutely and not relatively new. It must not have been known or used anywhere, and not described in any public work.[1]

§ 63. But there is an important proviso, introduced into the statute, which declares that whenever it shall satisfactorily appear that the patentee, at the time of making his application for the patent, believed himself to be the first inventor or discoverer of the thing patented, the same shall not be held to be void on account of the invention or discovery, or any part thereof, having been before known or used in any foreign country, it not appearing that the same or any substantial part thereof had before been patented or described in any printed publication.[2] So that, as the law now stands, an inventor who does not borrow from a foreign discovery, that is, who believes himself to be the first inventor or discoverer of the thing patented, can only be deprived of the benefit of his patent, by showing that the thing had been before patented, or described in some printed publication. It will not be enough to show that the thing had been known or used in a foreign country, if it had not been patented, or described in a printed publication.

§ 64. Thus, while the recent statute still continues the presumption that the patentee has seen the prior description contained in a printed publication, and makes that presumption

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while it puts the person who has had such prior use on the same footing, as if he had a special license from the inventor to use his invention; which, if *given before the application for a patent, would justify the continued use after* it issued without liability." So that here we have expressed in a pointed manner, the true object and intent of the 7th section of the Act of 1839, which was to give validity to the patent, and yet to secure to a purchaser from him before the patent, the same right to use the same after the patent which he previously possessed."

[1] Shaw *v.* Cooper, 7 Peters, 292. Dawson *v.* Follen, 2 Washington, 311. Act of 1836, § 15.

[2] Act of 1836, § 15.

conclusive,[1] it relieves an original inventor from the same presumption, arising out of the mere previous knowledge or use of the thing in a foreign country where it had not been patented or described; and if he can take the oath that he discovered or invented the thing, he will not be debarred of his patent, by a prior invention or discovery and secret use of the thing, in a foreign country.[2]

§ 65. No judicial construction has yet been given to the phrases, "described in some public work" and "described in any printed publication." It has been suggested by a learned writer, that the courts would not, probably, require that the description in a public work should fully answer as a specification, but would require that it should serve as a direction for making or doing the thing to which the description related.[3] It also remains to be determined what is to be considered as a "public work," or "printed publication."

§ 66. It remains to be stated, that the consideration upon which a patent is granted, is the novelty of every material thing, process, or part of the invention, included in the subject-matter, that is represented as a substantial and material part thereof; that this consideration is an entirety, and consequently, that if any part of it fails, the patent is invalid. This consequence results from the general principles of law which govern grants by the public, and these principles are recognized by the statute, which establishes as one of the defences to an action on a patent

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[1] Upon the former law, the Supreme Court of the United States said "It may be that the patentee had no knowledge of this previous use or previous description; still his patent is void; the law supposes he may have known it." Evans *v.* Eaton, 3 Wheat. 514.

[2] The text was written before the opinion on this point lately given by the Attorney-General of the United States, under date of August 30, 1848, which confirms my construction of the Statutes.

[3] Phillips on Patents, 175.

"that the patentee was not the original and first inventor or discoverer of the thing patented, or of a substantial and material part thereof claimed as new." [1]

§ 67. So also, in respect of utility, if a patent contains more than is necessary to produce the described effect, and the addition was made for the purpose of deceiving the public, it will be invalid; [2] and if the whole patent fails to produce the described effect, no action can be maintained upon it.[3]

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[1] Act of July 4th, 1836, § 15. See further, as to the failure of the patent in whole or in part, in respect to novelty, *post*, in the chapter on INFRINGEMENT. As to the mode of remedying these defects, See *post*, in the chapter on RENEWAL OF PATENTS, and in the chapter on DEFENCES.

[2] Act of July 4th, 1836, § 15.

[3] See *post* in the chapter on INFRINGEMENT.

CHAPTER II.

THE SUBJECT OF INVENTION OR DISCOVERY.

§ 68. The Act of Congress of July 4, 1836, ch. 357, § 6, declares the subject of letters-patent to be "any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement on any art, machine, manufacture or composition of matter." In the preceding chapter, we have considered the qualifications of novelty and utility, with reference to all these subjects; and we have now to treat of the several subjects themselves.

§ 69. In England, the Statute of Monopolies made the subject-matter of letters-patent "the sole working or making of any manner of new *manufactures* within this realm." It has been doubted whether the employment of other phrases has had any great tendency to elucidate the subject. Language may be inadequate to express all the minute distinctions which present themselves, in considering what may, consistently with the purposes and objects of the Patent Law, be the subject of a patent. But whether we have or have not gained anything in point of precision and certainty, by the enumeration in our statute, perhaps we have not enlarged the subjects of patents beyond the general scope of the English law, as judicially expounded. At least, the English exposition of the term "manufactures" will help us to understand what is intended by the classification in our own statute.

§ 70. The cardinal principle, which lies at the foundation of

the patent law in England, as well as in this and most other countries, is, that whatever be the character of the subject-matter, or the way in which it is described, the result must be an effect produced in manufactured, as distinguished from elementary matter.[1] The subject-matter of a patent may be either a thing produced or the mode of producing a thing; but it must be the one or the other, and can never be a new discovery of an elementary principle, without practical application to the production of some particular effect in matter. This fundamental rule is deducible not only from the meaning of the term "manufacture," which cannot be made to mean anything that does not result in manufactured matter in some way — but also from the general scope and spirit of the patent law, which was not designed to create monopolies in abstract principles or theoretical discoveries, but to promote the arts and manufactures of the country.[2]

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[1] "All invention, whatever its object, will consist in new applications, or adaptations. Matter is endowed with certain properties, and subject to certain laws; man cannot alter these properties or impose other laws, but he has the power of applying those properties and of giving occasion for the exercise of those laws according to his will, and the result of the exercise of that will, is exhibited in manufactured as distinguished from elementary matter." Webster on the Subject-Matter of Letters Patent for Inventions, (London, 1841,) p. 7.

[2] "Now the word 'manufactures' has been generally understood to denote either a thing made, which is useful for its own sake, and vendible as such, as a medicine, a stove, a telescope and many others, or to mean an engine or instrument, or some part of an engine or instrument, to be employed, either in the making of some previously known article, or in some other useful purpose, as a stocking-frame, or a steam engine for raising water from mines. Or it may perhaps extend also to a mere process, to be carried on by known implements or elements, acting upon known substances, and ultimately producing some other known substance, but producing it in a cheaper or more expeditious manner, or of a better or more useful kind. But no merely philosophical or abstract principle can answer to the word manufactures. Something of a corporeal and substantial nature, something that can be made by man from the matters subjected to his art and skill, or at the least, some new mode of employing practically his art and skill, is requisite to satisfy this word. A person, therefore, who applies to the crown for a patent, may represent himself to be the inventor of some new thing, or of some new engine

§ 71. But, subject to this restriction, the words "any manner of new manufacture" in the Statute of Monopolies, have received in construction a comprehensive import. According to the construction of the Courts, the word *manufacture* is used in the statute in a literal and a figurative sense. It is used in a literal sense, because it clearly includes any species of new manufactured article, or tangible product of industry; or a new machine, the construction or production of which, as an arrangement of matter, is the result at which the inventor aims. But when it is extended to include the mode of producing an old or well known substance, or an old and well known effect upon matter, by a new method or process, it seems to be used in a sort of figurative sense; because, in such cases it is the method or process of producing the thing or the effect, that is new and is the real subject of the invention, and the manufacture, or the result attained in matter is then made to stand in the place of the new method or process of attaining it.

§ 72. Thus, "manufacture" has been defined to be "something made by the hand of man;"[1] and it has also been held to include the practice of making a thing or of producing a re-

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or instrument. And in the latter case he may represent himself to be the inventor of a new method of accomplishing that object, which is to be accomplished by his new engine or instrument, as was the case of *Watt's* Patent, in which he represented himself to be the inventor of a new method of lessening the consumption of steam and fuel in fire engines, and by his specification he described certain parts to be used in the construction of fire engines. Or supposing a new process to be the lawful subject of a patent, he may represent himself to be the inventor of a new process, in which case it should seem that the word "method" may be properly used as synonymous with process. The language of the patent may be explained and reduced to certainty by the specification; but the patent must not represent the party to be the inventor of one thing, and the specification show him to be the inventor of another, because, perhaps, if he had represented himself as the inventor of that other, it might have been well known that the thing was of no use, or was in common use, and he might not have obtained a grant as the inventor of it." The King *v.* Wheeler, 2 B. & Ald. 349, 350.

[1] Per Lord Kenyon, in Hornblower *v.* Boulton, 8 T. R. 99.

sult.[1] As in Watt's patent for "a method of lessening the con-

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[1] "It was admitted at the argument at the bar, that the word '*manufacture*' in the statute, was of extensive signification, that it applied not only to things made, but to the *practice of making*, to principles carried into practice in a new manner, to new results of principles carried into practice. Let us pursue this admission. Under *things made*, we may class in the first place, new compositions of things, such as manufactures in the most ordinary sense of the word; secondly, all mechanical inventions, whether made to produce old or new effects, for a new piece of mechanism is certainly a thing made. Under the *practice of making* we may class all new artificial manners of operating with the hand, or with instruments in common use, new processes in any art, producing effects useful to the public. When the effect produced is some new substance or composition of things, it should seem that the privilege of the sole working or making ought to be for such new substance or composition, without regard to the mechanism or process by which it has been produced, which, though perhaps also new, will be only useful as producing the new substance. Upon this ground Dolland's patent was perhaps exceptionable, for that was for a *method* of producing a new object glass, instead of being for the object glass produced. If Dr. James's patent had been for his *method for preparing* his powders, instead of the *powders themselves*, that patent would have been exceptionable upon the same ground. When the effect produced is no substance or composition of things, the patent can only be for the mechanism, if new mechanism is used, or for the process, if it be a new method of operating, with or without old mechanism, by which the effect is produced. To illustrate this. The effect produced by Mr. David Hartley's invention for securing buildings from fire, is no substance or composition of things, it is a mere negative quality, the absence of fire. This effect is produced by a new method of disposing iron plates in buildings. In the nature of things the patent could not be for the effect produced. I think it could not be for making the plates of iron, which, when disposed in a particular manner produced the effect; for those are things in common use. But the invention consisting in the *method of disposing those plates of iron*, so as to produce their effect, and that effect being a useful and meritorious one, the patent seems to have been very properly granted to him for *his method* of securing buildings from fire. And this compendious analysis of *new manufactures* mentioned in the statute, satisfies my doubt whether anything could be the subject of a patent, but something organized and capable of precise specification. But for the more satisfactory solution of the other points, which are made in this case, I shall pursue this subject a little further. In Mr. Hartley's method, plates of iron are the means which he employs; but he did not invent those means, the invention wholly consisted in the new manner of *using*, or I would rather say of *disposing a thing in common use*, and which

sumption of steam and fuel in fire engines," which was held, after great consideration, to be a good subject-matter.[1] The distinction to which this case gave rise, and which greatly extended the meaning of the term "manufacture," is this: that although a principle, or a rule in mechanics, or an elementary truth in physics cannot be the subject of a patent, yet a new principle, rule, or truth, developed, carried out and embodied in the mode of using it, may be the subject of a patent. A mere principle is an abstract discovery, incapable of answering the term "manufacture;" but a principle so far embodied and connected with corporeal substances, as to be in a condition to act and to produce effects in any art, trade, mystery or manual occupation, becomes the practical manner of doing a particular

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every man might make at his pleasure, and which therefore, I repeat, could not, in my judgment, be the subject of the patent. In the nature of things it must be, that in the carrying into execution any new invention, use must be made of certain means proper for the operation. Manual labor, to a certain degree must always be employed: the tools of artists frequently; often things manufactured, but not newly invented, such as Hartley's iron plates; all the common utensils used in conducting any process, and so up to the most complicated machinery that the art of man ever devised. Now let the merit of the invention be what it may, it is evident that the patent in almost all these cases cannot be granted for the *means* by which it *acts*, for in them there is nothing new, and in some of them nothing capable of approbation. Even where the most complicated machinery is used, if the machinery itself is not newly invented, but only conducted by the skill of the inventor, so as to produce a new effect, the patent cannot be for the machinery. In Hartley's case it could not be for the *effect* produced, for the effect, as I have already observed, is merely negative, though it was moritorious. In the list of patents with which I have been furnished, there are several for new methods of manufacturing articles in common use where the sole merit and the whole effect produced, are the saving of time and expense and thereby lowering the price of the article and introducing it into more general use. Now I think these *methods* may be said to be *new manufactures*, in one of the common acceptations of the word, as we speak of the manufactory of glass or any other thing of that kind." Per Eyre, C. J. in Boulton *v.* Bull, 2 H. Bl. 492.

[1] Boulton *v.* Bull, *ut supra*. Hornblower *v.* Boulton, *ut supra*.

thing. It is no longer a principle but a process.[1] Mr. Watt's invention was the discovery of a practical means of lessening the consumption of steam, by protecting the cylinder from the external air, and keeping it at a temperature not below that of steam itself. He thus brought a principle into practical application, by the invention of a process.

§ 73. In like manner, a patent for the application of the flame of gas, instead of the flame of oil, to remove the superfluous fibres of lace, was sustained.[2] So too, where the invention consisted in the use and application of lime and mine-rubbish in the smelting of iron, Lord Eldon said, there might be a patent for a new combination of materials previously in use for the same purpose, or for a new method of applying such materials.[3] But this distinction has been made still more prominent by two recent cases. In one, the patent was for the application of anthracite combined with hot air blast in the smelting or manufacture of iron from iron stone, mine or ore; and the patent was sustained.[4] In the other, the invention was of a mode of welding iron tubes, without the use of a maundril, or any internal support; and this patent was also sustained.[5]

§ 74. These cases show that the term manufacture has been extended to include every object upon which art or skill can be exercised, so as to afford products fabricated by the hand of man, or by the labor which he directs.[6] In this sense it includes a process: so that a patent may, it is said, be taken for a process, method, or practical application of a principle, that will

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[1] See the remarks of Eyre C. J., *ante*.

[2] Hall *v.* Jervis, Webs. Pat. Cas. 100.

[3] Hill *v.* Thompson, 3 Mer. 626; Webs. Pat. Cas. 237. In Morgan *v.* Seaward, 2 Mees. & W. 544, Mr. Baron Parke said, "The word manufacture in the statute must be construed one of two ways; it may mean the machine when completed, or the mode of constructing the machine.

[4] Crane *v.* Price, Webs. Pat. Cas. 393, 408.

[5] Russell *v.* Cowley, Webs. Pat. Cas. 459.

[6] Webster's Law and Practice, Supplement, p. 8.

cover every means or apparatus, by which that process or method can be carried on, or by which that principle can be applied, provided the patentee has not only discovered the principle, but has also invented some mode of carrying it into effect.[1]

§ 74. *a.* But it is necessary here to consider the broad question, what constitutes a patentable subject, before we attend to the classification of patentable subjects adopted by our statute.

§ 75. It is constantly to be borne in mind, in considering what may be the subject of a valid patent, that it cannot be a mere elementary principle, or intellectual discovery; but if a principle constitutes an important part of the discovery it must be a principle put in practice and applied to some art.[2] A science, therefore, or an elementary principle or discovery in science cannot be the subject of a patent. So, too, there cannot be a patent for an effect, but it must be for the mode or means by which the effect is produced;[3] or the practical mode of operating, by means of certain agencies or properties of matter, or laws of physics, so as to produce a given effect.

§ 76. The consequences of allowing a patent for an abstract art or a principle, instead of allowing it only for a principle as applied to the production of a particular thing, or a particular result in matter, are apparent, when it is considered that principles are the elements of science, and if a patent could be taken for a newly-discovered principle in science, it would cover every

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[1] Forsyth *v.* Riviere, Webs. Pat. Cas. 97, note. Per Alderson, B., in Jupe *v.* Pratt, Ibid. 146, and in Neilson *v.* Harford, Ibid. 342.

[2] Earl *v.* Sawyer, 4 Mas. 1–6. "The very statement of what a principle is proves it not to be a ground for a patent. It is the first ground and rule for arts and sciences, or in other words, the elements and rudiments of them. A patent must be for some new production from those elements and not for the elements themselves." Per Buller, J., in Boulton *v.* Bull, 2 H. Bl. 485.

[3] Whittemore *v.* Cutter, 1 Gallis. 478, 480.

object to which that principle could be applied, and the whole field of the arts would thus at once be occupied by a few monopolists.[1] If a patent for an art or method of combining different elements or principles in science were possible, without its being confined to a particular product or result by means of such an art or method, every product, substance, or manufacture, to the creation of which that art or method could be applied, would be included in it. Thus it has been happily pointed out by an eminent English judge that if a man could have a patent for the principle or abstract art of intermixing water with oil colors, no other man could have had a patent for any distinct manufacture produced on the same principle.[2] The distinction is this: — if a discovery consists merely in detecting some new property of matter, or of the elements of nature, or the laws of physics, but no special and positive application is made of it to specific fabrications, it is a discovery in science, or abstract mechanics, and not patentable; but if the discoverer makes use of such a new property, or avails himself of scientific or mechanical principles, for the production of a new substance, instrument or machine, obtaining a result that is new, and of a vendible description, the particular mode of producing that particular thing may be the subject of a patent.[3] This distinction

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[1] "Indeed it seems impossible to specify a principle, and its application to all cases, which furnishes an argument that it cannot be the subject of a patent." Per Heath, J., in Boulton *v.* Bull, 2 H. Bl. 483.

[2] The case of water tabbies, which has often been mentioned in *Westminster Hall*, may afford some illustration of this subject. That invention first owed its rise to the accident of a man's spitting on a floor cloth, which changed its color, from whence he reasoned on the effect of intermixing water with oils or colors, and found out how to make water tabbies and had his patent for water tabbies only. But if he could have had a patent for the principle of intermixing water with oil or colors, no man could have had a patent for any distinct manufacture produced on the same principle, yet as the floor cloth and the tabby are distinct substances, calculated for distinct purposes and were unknown to the world before, a patent for one would be no objection to a patent for another." Per Buller, J., in Boulton *v.* Bull, 2 H. Bl. 487.

[3] A striking illustration of this distinction occurred before Mr. Justice

has been previously noticed; but it is necessary here to examine the doctrine and to ascertain to what objects the distinction has been applied and what seem to be its necessary limits.

§ 77. We have already seen that the term "manufacture" being the only generic term used in the Statute of Monopolies to describe the subjects of lawful patents, it became necessary to enlarge it by construction much beyond its literal import. As soon as it was held that a patent could be taken for the mode of producing an effect, as in Watt's case, for the mode of lessening the consumption of steam in a steam engine, the literal meaning of this term was widely departed from, and that was held to be a "manufacture" within the meaning of the statute, which in reality consisted in the new application of certain principles of physics, to effect the more economical use of a well known machine. This, of necessity, opened the whole subject of principle and method, and led to the doctrine which we are now to state.

Story. The plaintiff's specification claimed "as new, to cut ice, of a uniform size, by means of an apparatus worked by any other power than human. *The invention of this art*, as well as the particular method of the application of the principle, are claimed by the subscriber." The learned judge said "it is plain, then, that here the patentee claims a title to the art of cutting ice by means of any power, other than human power. Such a claim is surely unmaintainable in point of law. It is a claim for an art or principle in the abstract, and not for any particular method or machinery by which ice is to be cut. No man can have a right to cut ice by all means or methods, or by all or any sort of apparatus, although he is not the inventor of any or all of such means, methods, or apparatus." Wyeth *v.* Stone, 1 Story's R. 273, 285. But the court intimated that the claim for the particular method of the application of the principle would have been good, if a disclaimer had been filed in season as to that part of the claim which was clearly bad. *Ibid.*

See also Stone *v.* Sprague, 1 Story's R. 270, where in a patent for an improvement on looms, the invention claimed was the communication of motion from the reed to the yarn beam, in the connection of the one with the other, which is produced as follows, describing the mode, it was held, that the invention was limited to the specific machinery and mode of communicating the motion, &c. specifically described in the specification; otherwise it would be a claim for the abstract principle of communicating motion in all possible modes.

§ 78. Although a patent cannot be taken out for a new principle, yet, where it has been embodied, so as to be capable of being made active, it is, as we have seen, a proper subject of a patent; and if any other person puts that principle into use, in any other form, it is a question for a jury, whether that form be not substantially an adaptation of the principle, applied with the same view to answer the same end, and merely imitated in substance, whatever difference there may be in point of form. If the patentee has invented some mode of carrying the principle into effect, he is entitled, it is said, to protect himself from all other modes of carrying the same principle into effect.[1] In point of fact, the patent in such cases is taken, not for the principle itself but for the mode of carrying into effect;[2] so that when it is alleged that an infringement has taken place the question is whether the defendant has undertaken to carry the same principles into effect in the same mode, so that in substance, all the variations of means and appliances which he has made use of are merely colorable variations of the mode of carrying it into effect invented by the patentee. This seems to be what is intended by the learned judge whose observations are cited in the foregoing note, when he says that the patentee is entitled to protection against all other means of carrying the principle into effect.[3] He is entitled to protection against all

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[1] In Jupe *v.* Pratt, Webs. Pat. Cas. 144, 146, Alderson, B., said, "The difficulty which will press on you, and to which your attention will be called, in the present case, is this; you can take out a patent for a principle coupled with the mode of carrying the principle into effect, provided you have not only discovered the principle, but invented some mode of carrying it into effect. But then you must start with having invented some mode of carrying the principle into effect; if you have done that, then you are entitled to protect yourself from all other modes of carrying the same principle into effect, that being treated by the jury as a piracy of your original invention. But then the difficulty that will press on you here is, that on the evidence, there does not appear to have been any mode of carrying the principle into effect at all invented by you."

[2] See Hill *v.* Thompson, Webs. Pat. Cas. 227; 3 Meriv. 626.

[3] See the observations of the same learned judge, in Neilson *v.* Harford, Webs. Pat. Cas. 342.

colorable variations for carrying the same principle into practice for obtaining the same effect or result.[1]

§ 79. Thus, there may be a patent for the practical application of a known thing to produce a particular effect. As in the case of Hartley's invention to protect buildings from fire, by the application of plates of metal.[2] So too, in the case of Forsyth's patent, for the application of detonating powder, which he did not invent, to the discharge of artillery, mines, &c. the patentee succeeded in an action against a party using a lock of different construction to any shown in the drawing annexed to his specification, and thus established his right to the exclusive use and application of detonating powder as priming, whatever the construction of the lock by which it was discharged.[3] In the same way, where the plaintiff had obtained a patent for the application of the flame of gas, to singe off the superfluous fibres of lace and other goods, but did not claim the exclusive use of any apparatus or combination of machinery, except in connection

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[1] In Gray *v.* James, Peters's Cir. C. R. 394, 400, where the patent was "for an improvement in the art of making nails by means of a machine which cuts and heads the nail at one operation," Washington, J., applied the same doctrine, holding that where two machines are substantially the same, and operate in the same manner, to produce the same result, they must be in principle the same; and that when the same result is referred to as the test, it must mean the same kind of result though it may differ in extent. He further instructed the jury as follows: "The patent is supposed to be for the machine itself, which is composed of parts which have long become public property. This is not the fact. The patent is for an improvement in the art of making nails by means of a machine which cuts and heads the nails at one operation. It is therefore not the grant of an abstract principle, nor is it the grant of the different parts of any machine; but of an improvement applied to a practical use, effected by a combination of various mechanical powers to produce a new result. The lever, the vice, the cutters, the dies, &c. may be used by any person without a violation of the plaintiff's patent. But they cannot be used in their combined state to produce by the same operation, the same result, which is the distinguishing characteristic of the plaintiff's machine, without a license from the owners."

[2] See Boulton *v.* Bull, 2 H. Bl. 495. Webs. Pat. Cas. 54, 56, note.

[3] Forsyth *v.* Riviere, Webs. Pat. Cas. 95, 97, note.

with, and in aid of the application of the flame of gas to the purposes described in his specification, he had a verdict founded on his sole right to use gas flame for the clearing of fibres from lace.[1] So also, where the invention consisted in the use of anthracite or stone coal, combined with the hot air-blast, in the smelting or manufacture of iron from iron stone, mine or ore; and the using of the hot blast was known before in the manufacture of iron with bituminous coal, and the use of anthracite or stone coal was known before in the manufacture of iron with cold blast, but the combination of the hot blast and the anthracite was not known before in the manufacture of iron, the Court of Common Pleas declared, that if the result produced by such a combination is either a new article or a better article, or a cheaper article to the public than that produced before by the old method, such combination is an invention or manufacture intended by the statute, and may well become the subject of a patent.[2] Again, where the invention was to manufacture iron

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[1] Hall *v.* Jervis, Webs. Pat. Cas. 100, 103.

[2] Crane *v.* Price, Webs. Pat. Cas. 393, 408. In this case Sir N. C. Tindall, C. J., said; "Now in order to determine whether the improvement described in the patent, is or is not a manufacture within the statute, we must, in the first place, ascertain precisely what is the invention claimed by the plaintiff; and then, by the application of some principles, admitted and acknowledged in the application of the law relating to patents, and by the authority of decided cases, determine the question in dispute between the parties. The plaintiff describes the object of his invention to be the application of anthracite or stone coal, combined with hot air-blast in the smelting or manufacture of iron from iron stone, mine, or ore, and states distinctly and unequivocally at the end of his specification, that he does not claim the use of a hot air-blast, separately, as of his invention, when uncombined with the application of anthracite or stone coal. Nor does he claim the application of anthracite or stone coal, when uncombined with the using of hot air-blast, in the smelting and manufacture of iron from iron stone, mine or ore. And the question, therefore, becomes this — whether, admitting the using of the hot air-blast to have been known before in the manufacture of iron with bituminous coal, and the use of anthracite or stone coal, to have been known before in the manufacture of iron with coal blast, but that the combination of the two together (the hot blast and the anthracite) were not known to be

tubes by welding them, without the use of any maundril, or

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combined before in the manufacture of iron, whether such combination can be the subject of a patent.

We are of opinion, that if the result produced by such a combination is either a new article, or a better article, or a cheaper article to the public, than that produced before by the old method, that such combination is an invention or manufacture intended by the statute, and may well become the subject of a patent. Such an assumed state of facts falls clearly within the principle exemplified by Abbott, C. J., (The King *v.* Wheeler, 2 B. & Ald. 349,) where he is determining what is or what is not the subject of a patent; namely, it may, perhaps, extend to a new process, to be carried on by known implements or elements acting upon known substances, and ultimately producing some other known substance, but producing it in a cheaper or more expeditious manner, or a better or more useful kind. And it falls also within the doctrine laid down by Lord Eldon, (Hill *v.* Thompson, Webs. Pat. Cas. p. 237,) that there may be a valid patent for a new combination of materials previously in use for the same purpose, or even for a new method of applying such materials. But the specification must clearly express, that it is in respect of such new combination or application.

There are numerous instances of patents, where the invention consisted in no more than in the use of things already known, and acting with them in a manner already known, and producing effects already known, but producing those effects so as to be more economically or beneficially enjoyed by the public. It will be sufficient to refer to a few instances, some of which patents have failed on other grounds, but none on the ground that the invention itself was not the subject of a patent.

We may first instance Hall's patent for applying the flame of gas to singe off the superfluous fibres of lace, where a flame of oil had been used before for the same purpose. (Webs. Pat. Cas. p. 97.) Derosne's patent, in which the invention consisted in filtering the syrup of sugar through a filter, to act with animal charcoal, and charcoal from bituminous schistus, where charcoal had been used before in the filtering of almost every other liquor, except the syrup of sugar. (Webs. Pat. Cas. p. 152.) Hill's patent, above referred to, for improvements in the smelting and working of iron; there the invention consisted only in the use and application of the slags or cinders thrown off by the operation of smelting, which had been previously considered useless for the production of good and serviceable metal, by the admixture of mine rubbish. Again, Daniell's patent was taken out for improvements in dressing woollen cloth, where the invention consisted in immersing a roll of cloth, manufactured in the usual manner, into hot water. (Webs. Pat. Cas. 71, note *e.*, and the King *v.* Daniell, Godson on Pat. 274.)

The only question, therefore, that ought to be considered on the evidence

internal support, but the patentee did not claim any precise construction of apparatus for this purpose, but his claim consisted in heating the previously prepared tubes of iron to a welding heat, and then without any internal support, drawing them between dies or holes, by which the edges of the heated iron became pressed and welded together; and the defendant had made tubes upon the same principle of manufacture, but with a somewhat varied apparatus; the patentee had a verdict for the infringement, and his patent was afterwards sustained before the Court of Exchequer *in banc*.[1]

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is, was the iron produced by the combination of the hot blast and the anthracite, a better or a cheaper article than was before produced from the combination of the hot blast and the bituminous coal; and was the combination, described in the specification, new, as to the public use thereof in England. And, upon the first point, upon looking at the evidence in the cause, we think there is no doubt, that the result of the combination of the hot blast with the anthracite on the yield of the furnace was more, the nature, properties and quality of the iron better, and the expense of making the iron less than it was under the former process, by means of the combination of the hot blast with the bituminous coal."

[1] Russell *v.* Cowley, Webs. Pat. Cas. 459, 465. At the trial, at the close of the plaintiff's case, Lord Lyndhurst, C. B., who presided, recalled Mr. Brunel and Mr. Donkin, when the following questions were put, and answers given: Lord Lyndhurst, C. B.: "When the upper roller is down, its lower edge lies upon the upper ledge of the under roller; and there is a hole between the rollers, and through that hole, by means of the revolution of the rollers, the heated tube is drawn. Now, I wish to ask you, whether that (without the scorpion) which they say, by pressure, welds the heated tube — the sides of the hole, they say, weld the tube — is in your judgment similar, though not exactly the same, similar to the invention of the plaintiff; the plaintiff stating that his invention is of this description — "The principle of my invention is the heating the previously prepared tubes of iron to a welding heat, that is, nearly to the point of fusion, and then, after withdrawing them from the fire, to pass them between dies, or through holes, by which the edges of the heated iron may be pressed together, and the joint firmly welded;" "I want to know whether that effect is produced by the rollers, although not so perfectly as by the dies?" Mr. Brunel — "It is produced by the rollers."

"Then I want to know whether the passing them through the rollers in that way alone is not similar, although not so perfect, as passing them through the dies or through the tongs?" Mr. Brunel — "It is my opinion that it is the same."

§ 80. And where the invention consisted in the application of heated air as a blast for fires, forges, and furnaces, but the patentee claimed no particular form of apparatus for heating the air, but described an apparatus by which it might be heated; and the defendant had employed an apparatus confessedly superior in its effects to that described in the plaintiff's specification, and such an improvement as would have supported a patent; but as it involved the principle of the plaintiff's invention, it was held an infringement.[1]

"It is by the pressure of the sides of that hole, that the edges of the heated iron are welded together?" Mr. Brunel — "It is."

"By passing through the holes of the dies, it is by the pressure of the sides of the hole that the edges of the heated iron are welded together?" Mr. Brunel — "Quite so."

"Then I ask, whether, if it is a question of welding, the one is in your judgment similar to the other?" Mr. Brunel — "It is."

"Mr. Donkin, you have heard the questions I have put to Mr. Brunel — I wish to have your opinion upon the same point?" Mr. Donkin — "I think the holes, when closed, one upon the other, produce a similar effect, and the method of welding is therefore the same."

"Then you think one invention, in principle, is similar to the other?" Mr. Donkin — "I do."

Lord Lyndhurst, C. B.: I confess it appeared to me from reading the specification, that without the scorpion, the one is an imitation of the other; because this party says, "I do not claim this particular apparatus only. I do it by the die, or I do it by the tongs; the principle of my invention is, to pass the heated tubes through the hole at a welding heat, and by pressure occasioned by that hole, to unite together the heated edges by welding." That may be done more or less perfectly — whether it is by the rollers or by the tongs, it is not very material; the one is similar in principle to the other,

[1] Neilson *v.* Harford, Webs. Pat. Cas. 295, 310, 328. Mr. Baron Parke in this case said to the Jury: "Now the best way of disposing of this case, I think will be to take those questions in order upon which you are to pronounce your opinion; and the first is, whether the defendants have been guilty of infringing the patent? and I apprehend that there is no doubt they have, if the patent be a good patent, and if the specification be free from the objections that are raised to it; and if the specification is to be understood in the sense claimed by the plaintiffs, the invention of heating the air between its leaving the blowing apparatus and its introduction into the furnace, in any way, in any close vessel, which is exposed to the action of heat, there is no doubt that the defendants' machinery is an infringement of that patent, because it is

§ 81. In cases of this class, where the most important part and merit of the invention consists in the conception of the original idea, rather than in the manner in which it is to be carried out, or applied in practice, it is clear that a principle carried into practice by *some* means, constitutes the subject-matter of the patent. Inventions of this class may have a character totally independent of the particular means by which they are applied, although the patentee must have applied the invention by some means; and when he has done so, the imitating that character may be a piracy of that invention, although the means may be very different, and such as in themselves might constitute a distinct or substantial invention.[1] The machinery employed is not of the essence of the invention, but incidental to it.[2] In cases like the foregoing, however, although machinery, apparatus, or other arrangement of matter is not of the essence of the invention, still it is of some importance. But there is another class of cases, where the application of a principle is still more distinctly seen to constitute the subject-matter of the invention, because it requires no peculiar and substantive machinery or apparatus, or composition of matter, to give it application.

§ 81. *a*. In these cases, the subject-matter of the invention is an application and adaptation of a natural or known agent, or a known substance or thing, to produce a given effect.[3]

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the use of air which is heated much more beneficially, and a great improvement upon what would probably be the machine constructed by looking at the specification alone; but still it is the application of heated air, heated in one or more vessels between the blowing apparatus and the furnace, and therefore if it should turn out that the patent is good, and the specification is good, though unquestionably what the defendants have done is a great improvement upon what would be the species of machinery or apparatus constructed under this patent, it appears to me that it would be an infringement of it; therefore your verdict upon that issue would be for the plaintiff, provided it is for the plaintiff on the other issues."

[1] Webster on the Subject-Matter, &c. p. 18.

[2] Per Eyre C. J., in Boulton *v.* Bull, 2 H. Bl. 496.

[3] The adaptation of the properties and qualities of a known substance to a

As in Daniell's patent for improvements in dressing woollen cloth, the invention consisted in immersing cloth, manufactured in the usual manner, in hot water; and in Fusell's patent the cloth was subjected to a steam bath with the same object.[1] In Christ's patent for "improvements in copper and other plate printing," the substance of the invention was in the preparation of the paper, and the particular means by which this was effected was by "putting a glazed enamelled surface on the paper by means of white lead and size, whereby the finer lines of the engraving are better exhibited than heretofore."[2] So too, the omission of any ingredient previously used in and considered essential to a particular process or manufacture, constitutes such a change in the series of processes pursued, as to be a new manufacture. As where a patent was taken for "a new and improved method of making and manufacturing double canvass and sail cloth with hemp and flax, or either of them, without

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particular purpose, for which they had never been known or used before, may be the subject of a patent. As the use of india rubber as a fillet, in cards for carding wool, &c., to receive the teeth, and thereby to give them greater firmness and elasticity, than when they are set in leather. See Walton *v.* Potter, Webs. Pat. Cas. 585, 604.

[1] Webster on the Subject-Matter, &c. p. 22. The latter patent was held an infringement on the former; but both were repealed for want of novelty. *Ibid.*

[2] Sturz *v.* De La Rue, 5 Russ. Ch. R. 322, 324. In this case Lord Lyndhurst, C. B. said, "Copperplate printing consists of processes involving a great variety of circumstances; the paper must be of a particular description; before it is used, it must be damped; it must remain damp a certain time, and must be placed in a certain temperature; the plate must be duly prepared, and duly applied, and various processes must be gone through before the impression is drawn off and brought to a finished state. An improvement in any one of these circumstances, in the preparation of the paper, for instance, in the damping of it, &c., may truly be called *an improvement in copperplate printing*. In this case, the principal part of the improvement relates to the preparation of the paper. It is material to the perfection of the copperplate printing that the lines should be as distinct as possible; and if, by adding anything to the surface of the paper, more clearness is given to the lines, that is an improvement in copperplate printing."

any starch whatever;"[1] and where another invention, for rendering cloth fabrics water proof, consisted in immersing them in various solutions in a different order from that which had been previously followed, although the same solutions had been previously used.[2]

§ 82. It appears, then, that there is a large class of cases, where improvements or inventions in the mode of producing a particular known effect will be the subject-matter of letters-patent; and another large class of cases, in which the discovery and application of new means of producing an effect before unknown, will also be the subject-matter of a patent. One of these classes embraces all cases of the new application of known agents and things, so as to lead to a change in the series of processes by which the particular effect, result, or manufacture is produced, or by which an entirely new effect, result, or manufacture is produced. The other embraces all cases of the discovery and application of new agents or things, by which a new effect or result is to be produced.[3]

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[1] Campion *v.* Benyon, 4 B. Moore, 71, cited Webster on the Subject-Matter, &c., p. 23, note.

[2] Halliwell *v.* Dearman, Webs. Pat. Cas. 401, note (*t.*) "The object of the plaintiff's invention was the rendering fabrics water proof, but at the same time leaving such fabrics pervious to air. It appeared that before the plaintiff's patent a solution of alum and soap was made, and the fabric to be rendered water proof was immersed therein. By this means a water proof surface was produced on the fabric, but it was not of a lasting nature, it wore off. According to the plaintiff's invention, the fabric is immersed first in a mixture of a solution of alum with some carbonate of lime, and then in a solution of soap. The effect is, that by the first immersion every fibre becomes impregnated with the alum, the sulphuric acid of the alum being neutralized by the carbonate of lime, and by the second immersion the oily quality, rendering it repellant of water, is given to every fibre, so that each fibre is rendered water proof, instead of the surface only; but the whole fabric continued pervious to air."

[3] The application of electricity for the transmission of signals or messages, copying impressions and gilding, and the application of light for the purposes of photography, belong to one or the other of these classes, according to the

§ 83. In determining whether an alleged invention or discovery is such as will support a patent, the question must often arise, what is meant by the application of a principle? And this question involves two inquiries; first, how must the principle be made use of, and secondly, what must be the result produced?

§ 84. It has already been stated, that the embodiment of a principle, so that it may be in a condition to act and to produce an effect, may be the subject of a patent. There is, in other words, a distinction between the principle that is so embodied, and the principle of such embodiment; the former is a truth of exact science, or a law of matter, or a rule of practice; while the latter is the practice founded on such truth, law, or rule.[1]

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view taken of the agents made use of, and the result produced. In the case of the electric telegraph, electricity was an agent known before this application; the effect, as produced by electricity, was wholly new. The same may be said of the use of light in photography, for although pictures existed before, such pictures as are produced by that process were wholly new. It is not always necessary, perhaps not expedient, to attempt a rigid classification of such inventions. Each is to be tested by the application of general principles to the particular facts of the case. In analyzing the subject-matter of the invention, when it is of this character, we must first determine whether the agents employed are themselves newly-discovered, or well known; secondly whether they are applied in a new method; thirdly, whether they produce, as applied, a new or an old result. According to the results of this analysis, we may determine the patentable character of the invention or discovery.

[1] Webster on the Subject-Matter, p. 44. A clear illustration of this distinction is to be found in the case of Blanchard v. Sprague, 3 Sumner's R. 535. The plaintiff's patent was for "An invention of a machine for turning or cutting irregular forms." The plaintiff in his specification declared that "as to the mechanical powers by which the movements are obtained, he claims none of them as his invention. These movements may be effected by application of various process indifferently. Neither does he claim as his invention the cutter wheel, or cutters, or friction wheel as such, nor the use of a model to guide the cutting instrument, as his invention. All these are common property, and have been so for years, but he claims *as his invention the method or mode of operation in the abstract, explained in the second article,*

§ 85. This practice consists in the application of the principle. But it is not every application of the principle, or every occasion on which the principle can be applied, that can be the subject of a patent. The principle may have been discovered and applied before, and when this is the case, the new application may be only what is described in patent law as a "double use," which cannot be the subject of a patent. In such cases, there may be in the new application some degree of novelty; something may have been discovered, or found out, that was

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whereby the infinite variety of forms, described in general terms in this article may be wrought." In another part of his specification he said — "In explaining and describing the different modes in which he contemplates the application of the principle or character of his said machine or invention, he does this in compliance with the requirements of the law, and not by way of extending his claim for discovery or invention. His invention is described and explained in the second article of this specification, to which reference is hereby made for information of that, which constitutes the principle or character of his machine or invention, and distinguishes it, as he verily believes, from all other machines, discoveries or inventions, known or used before. In the second article, to which he refers, the plaintiff explained the principle and character of his machine, and the mode of constructing it to effect the different objects to be accomplished, and the mode of operation."

Mr. Justice Story said, "Looking at the present specification, and construing all its terms together, I am clearly of opinion, that it is not a patent claimed for a function, but it is claimed for the machine specially described in the specification; that it is not for a mere function but for a function as embodied in a particular machine, whose mode of operation and general structure are pointed out. In the close of his specification, the patentee explicitly states that his "invention is described and explained in the second article of his specification, to which reference is made for information of that, which constitutes the principle or character of his machine or invention, and distinguishes it, as he verily believes, from all other machines, discoveries, or inventions known or used before." Now, when we turn to the second article, we find there described, not a mere function, but a machine of a particular structure whose modes of operation are pointed out, to accomplish a particular purpose, function, or end. This seems to me sufficiently expressive to define or ascertain, what his invention is. It is a particular machine, constituted in the way pointed out, for the accomplishment of a particular end or object. The patent is for a machine, and not for a principle or function detached from machinery."

not known before, but unless the new occasion on which the principle is applied leads to some kind of new manufacture, or to some new result, it is only a double use of that which was known before.

§ 86. Illustrations of this distinction may be seen in the application of well known medicines, drugs, and chemical substances upon new occasions, or for new specific purposes. If it is discovered that a medicine known and used as a valuable remedy in one class of diseases, has also great efficiency in curing another and different disease, there is a new application of a known thing, but it is only a double use of that thing.[1]

§ 87. In order to escape the objection of a double use, it is necessary that the new occasion or purpose to which the use of a known thing is applied should not be merely analogous to the former occasions or purposes to which the same thing has been applied. There is a very material distinction between applying a new contrivance to an old object, and an old contrivance to a new object. The former may be patentable, but the latter cannot be, when the new object is merely one of a class possessing a common analogy. Thus, where a certain description of wheels had been used on other carriages than railway car-

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[1] In Boulton *v.* Bull, 2 H. Bl. 487, Buller, J. said, "Suppose the world were better informed than it is, how to prepare Dr. Janes's fever powder, and an ingenious physician should find out that it was a specific cure for a consumption, if given in particular quantities; could he have a patent for the sole use of Janes's powders in consumptions, or to be given in particular quantities? I think it must be conceded that such a patent would be void, and yet the use of the medicine would be new, and the effect of it as materially different from what is now known, as life is from death. So in the case of a late discovery, which, as far as experience has hitherto gone, is said to have proved efficacious, that of the medicinal properties of arsenic in curing agues, could a patent be supported for the sole use of arsenic in aguish complaints. The medicine is the manufacture, and the only object of a patent, and as the medicine is not new, any patent for it, or for the use of it, would be void."

riages, Lord Abinger, C. B., held that the plaintiff could not claim a patent merely for the use of such wheels upon railway carriages;[1]

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[1] Losh *v.* Hague, Webs. Pat. Cas. 207. In this case his Lordship said to the jury, "The learned counsel has stated to you, and very properly, and it is a circumstance to be attended to, that Mr. Losh has taken out his patent to use his wheels on railways. Now, he says, the wheels made by Mr. Paton, or by the other workmen who were called as witnesses, were never applied to railways at all. That opens this question, whether or not a man who finds a wheel ready made to his hand, and applies that wheel to a railway, shall get a patent for applying it to a railway. There is some nicety in considering that subject. The learned counsel has mentioned to you a particular case, in which an argand lamp burning oil having been applied for singing gauze, somebody else afterwards applied a lamp supplied with gas for singing lace, which was a novel invention, and for which an argand lamp is not applicable, because gas does not burn in the same way as oil in an argand lamp. But a man having discovered by the application of gas he could more effectually burn the cottony parts of the gauze by passing it over the gas, his patent is good. (Webs. Pat. Cas. p. 98, Hall's Patent.) That was the application of a new contrivance to the same purpose; but it is a different thing when you take out a patent for applying a new contrivance to an old object, and applying an old contrivance to a new object, that is a very different thing; if I am wrong, I shall be corrected. In the case the learned counsel put, he says, if a surgeon goes into a mercer's shop, and sees the mercer cutting velvet or silk with a pair of scissors with a knob to them, he seeing that would have a right to take out a patent in order to apply the same scissors to cutting a sore, or a patient's skin. I do not quite agree with that law. I think if the surgeon had gone to him, and said, "I see how well your scissors cut," and he said, "I can apply them instead of a lancet, by putting a knob at the end," that would be quite a different thing, and he might get a patent for that; but it would be a very extraordinary thing to say, that because all mankind have been accustomed to eat soup with a spoon, that a man could take out a patent because he says you might eat peas with a spoon. The law on the subject is this; that you cannot have a patent for applying a well known thing which might be applied to fifty thousand different purposes, for applying it to an operation which is exactly analogous to what was done before. Suppose a man invents a pair of scissors to cut cloth with, if the scissors were never invented before, he could take out a patent for it. If another man found he could cut silk with them, why should he take out a patent for that? I must own, therefore, that it strikes me, if you are of opinion this wheel has been constructed, according to the defendant's evidence, by the persons who have been mentioned, long before the plaintiff's patent, that although there were no railroads then to apply them to, and no

and where a patent claimed as the invention of the patentee a process of curling palm leaf for mattresses, but it appearing that hair had long been prepared by the same process for the same purpose, Mr. Justice Story, held it to be a mere double use of an old process.[1]

§ 88. When, therefore, the principle is well known, or the application consists in the use of a known thing to produce a particular effect, the question will arise, whether the effect is of itself entirely new, or whether the occasion only upon which the particular effect is produced, is new. If the occasion only is new, then the use to which the thing is applied, is simply analogous to what had been done before. But if the effect itself is new, then there are no known analogous uses of the same

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demand for such wheels, yet that the application of them to railroads afterwards, by Mr. Losh, will not give effect to his patent, if part of that which is claimed as a new improvement by him is in fact an old improvement, invented by other people, and used for other purposes; that is my opinion on the law, and on that I am bound to direct you substantially."

[1] Howe *v.* Abbott, 2 Story's R. 190, 193. In this case the learned Judge said, "In the first place it is admitted on all sides, that there is no novelty in the process, by which the stripping, or twisting, or curling the palm leaf, is accomplished. The same process of twisting, and curling, and baking, and steaming, has long been known and used in respect to hair used for beds, mattresses, sofas, and cushions. It is therefore the mere application of an old process and old machinery to a new use. It is precisely the same, as if a coffee-mill were now, for the first time, used to grind corn. The application of an old process to manufacture an article, to which it had never before been applied, is not a patentable invention. There must be some new process, or some new machinery used, to produce the result. If the old spinning machine to spin flax were now first applied to spin cotton, no man could hold a new patent to spin cotton in that mode; much less the right to spin cotton in all modes, although he had invented none. As, therefore, Smith has invented no new process or machinery, but has only applied to palm leaf the old process, and the old machinery used to curl hair, it does not strike me that the patent is maintainable. He who produces an old result by a new mode or process, is entitled to a patent for that mode or process. But he cannot have a patent for a result merely, without using some new mode or process to produce it."

thing, and the process may constitute such an art as will be the subject of a patent. Thus, the use of scissors to cut one substance produces a particular effect, entirely analogous to that produced when they are used to cut another substance; the effect, therefore, is not new. But the use of gas to singe off the superfluous fibres of lace, was the use of an agent for a purpose not analogous to any other purpose for which the same agent had ever been used before; and, therefore, the effect, as produced by that agent, was new. Great discrimination, however, is to be used, in determining whether the analogy is such as to justify the inference that the occasion only is new, and that the effect is not new. Of course, if any new contrivances, combinations, or arrangements are made use of, although the principal agents employed are well known, those contrivances, combinations or arrangements, may constitute a new principle, and then the application or practice will necessarily be new also.[1] But where there is no novelty in the preparation or arrangement of the agent employed, and the novelty professedly consists in the application of that agent, being a well-known thing; or in other terms, where it consists in the practice only, the novelty of that practice is to be determined, according to the circumstances, by applying the test, of whether the result or effect produced is a new result or effect, never before produced.[2] If a new manufacture is produced, or if an old manufacture is produced by new means, then the result or effect is new, as produced by that particular means, and the new case is such as can be protected by letters-patent. But if only an old manufacture is produced, or an old result is attained by means analogous to what the

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[1] As where anthracite and hot-air blast were used in the manufacture of iron, in the place of bituminous coal and hot-air blast; and where sail-cloth was made with the omission of an ingredient before used, that is, by a different combination from that before used.

[2] As in the case of the application of bells to fire-engines, to be rung by the motion of the carriage, for the purpose of alarms or notice; which Washington, J., instructed the jury might be a subject for a patent. *Park v.* Little, 3 Wash. 196. The application of steam for propelling boats is another illustration of novelty in practice. Ibid.

same means have produced when applied the same way in other cases, the new occasion of using those means does not constitute a case that can be protected by a patent.

§ 89. Our statute having undertaken to classify the subjects of patents under four general heads, we may here state what is supposed to be embraced in each of them.

§ 90. I. An Art. The first subject of a patent mentioned in the statute is "any new and useful art," or "any new and useful improvement of an art." This term embraces the useful as distinguished from the fine arts. It applies to all those cases, where the application of a principle is the most important part of the invention, and where the machinery, apparatus or other means by which the principle is applied, is incidental only and not of the essence of the invention. It applies also to all those cases, where the result, effect, or manufactured article is old, but the invention consists in a new process or method of producing such result, effect or manufacture. But where machinery or apparatus of any kind is the chief subject of invention, or where the result, effect, or article produced is new, the subject of the patent will fall under one or the other of the classes designated in the statute as "machine," "manufacture," or "composition of matter," according to its principal characteristics and objects.

§ 91. A case which occurred before Mr. Justice Washington furnishes an illustration of an "art," as the subject of a patent. The plaintiff alleged himself to be the inventor of a new and useful improvement in the printing of bank notes, which was said to furnish an additional security against counterfeiting. The invention, as summed up in his specification, was "to print copperplate on both sides of the note or bill; or copperplate on one side, and letter-press on the other; or letter-press on both sides of a bank-note or bill, as an additional security against counterfeiting." The art of printing with both letter-press and copperplate, was not the invention of the plaintiff. He made

use of old materials and processes, in a new manner, for the purpose of producing a new effect, namely, a new security against counterfeiting. His patent therefore was for the new application of the process of printing by copperplate and letter-press, by printing on both sides of the note; and this new application was held by the court to be an art within the terms of the statute.[1]

§ 92. Another illustration is presented by a patent for a mode of casting iron rollers or cylinders, so that when the metal was introduced into the mould, it should receive a rotatory motion, by which the dross would be thrown into the centre instead of upon the surface of the cylinder. This was effected solely by changing the direction of the tube which conveyed the metal to the mould, from a horizontal or perpendicular position to a direction approaching a tangent of the cylinder.[2]

§ 93. II. A Machine. A machine, to be the subject of a patent, must be a particular construction of mechanism, containing the improved method of producing an old effect, or the method of producing a new effect. If the subject of the invention or discovery is not a mere function, but a function embodied in some particular mechanism whose mode of operation and general structure are pointed out, and which is designed to accomplish a particular purpose, function, or effect, it will be a machine, in the sense of the patent law.[3] A machine is rightfully the subject of a patent, when well-known effects are produced by machinery entirely new in all its combinations, or when a new or an old effect is produced by mechanism, of which the principle or *modus operandi* is new.[4] The word

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[1] Kneass *v.* The Schuylkill Bank, 4 Wash. 9, 12.

[2] McClurg *v.* Kingsland, 1 Howard, 204. See also Gray *v.* James, Peters's Circ. C. R. 394.

[3] Blanchard *v.* Sprague, 3 Sumner's R. 535, 540.

[4] Whittemore *v.* Cutter, 1 Gallis. 480; Boulton *v.* Bull, 2 H. Bl. 463, 468. When a mode of doing a thing is referred to something permanent, it

"machine" in the statute, includes new combinations of machines, as well as new organizations of mechanism for a single purpose. There may be a patent for a new combination of machines to produce certain effects, whether the machines constituting the combination be new or old. In such cases, the thing patented is not the separate machines, but the combination.[1] A single instance of such a combination is presented by the telescope, in which a convex and concave glass of different refracting powers are combined to make the object-glass.[2] What constitutes a claim for a combination only, and what will be a claim for the specific parts of a machine, as well as for the combination, is a question of construction on the patent and specification, the rules for which will be stated hereafter. But it is proper here to state the general principles applicable to combinations as the subject-matter.

§ 94. Where the invention consists of several distinct and independent improvements in the same machine, a patent may be taken for them in the aggregate, and such a patent will protect each of the improvements. But when the patent is for a new combination of existing machinery or machines, and does not specify or claim any improvements or inventions, except the combination, the subject-matter of the patent will be the combination alone, and the making of the separate machines will not be an infringement of it.[3]

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is properly termed an engine; when to something fugitive, a method. Per Heath, J., in Boulton *v.* Bull.

[1] Barrett *v.* Hall, 1 Mas. 474; Evans *v.* Eaton, 3 Wheat. 454, 476, 506; Prouty *v.* Draper, 1 Story's R. 568; Park *v.* Little, 3 Wash. 196; Pitts *v.* Whitman, 2 Story's R. 609; Ames *v.* Howard, 1 Sumner, 482.

[2] Dolland's case, Webs. Pat. Cas. 42, 43.

[3] In Barrett *v.* Hall, 1 Mas. 447, 474, Mr. Justice Story laid down the doctrine thus: "A patent may be for a new combination of machines to produce certain effects; and this, whether the machines, constituting the combination, be new or old. But in such case, the patent being for the combination only, it is no infringement of the patent to use any of the machines separately, if the whole combination be not used; for in such case the thing

§ 95. The statute also makes a new and useful "improvement" of a machine the subject of a patent. A patent for the

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patented is not the separate machines, but the combination; and the statute gives no remedy, except for a violation of the thing patented. This was the doctrine of Mr. Justice Washington in his most able opinion in Evans *v.* Eaton; and it has not been in the slightest degree shaken in the Supreme Court. (Evans *v.* Eaton, 3 Wheaton's R. 454, 476, 506.) I hesitate not one moment in adopting it, as established on solid foundations. It has indeed been said, that where there is a patent for the whole of a machine, whoever imitates it, either in whole or in part, is subject to an action at the suit of the patentee. (Bovill *v.* Moore, 2 Marsh. R. 211.) But supposing this doctrine to be true in any case and under any qualifications (which may well be doubted) it can apply only, where the whole machine is entirely new, and cannot apply, where the patent is limited, by its very terms, to the combination of several machines." In the subsequent case of Moody *v.* Fisk, 2 Mas. 115, 117, the same learned judge said, "Where the patent goes for the whole of a machine as a new invention, and the machine is in its structure substantially new, any person who pirates a part of the machine, substantially new in its structure, deprives the inventor so far of his exclusive right in his invention, and may in a great measure destroy the value of the patent. Where the patent is for several distinct improvements in an existing machine, or for an improved machine, incorporating several distinct improvements, which are clearly specified, then if a person pirates one of the improvements, he violates the exclusive right of the patentee, for the patent is as broad as the invention, and the invention covers all the improvements; and it is a wrong done to the patentee to deprive him of his exclusive right in any of his improvements. Where a patent is for a *new combination* of existing machinery, or machines, and does not specify or claim any improvements or invention, except the combination, unless that combination is substantially violated, the patentee is not entitled to any remedy, although parts of the machinery are used by another, because the patent, by its terms, stands upon the *combination* only. In such a case, proof that the machines, or any part of their structure existed before, forms no objection to the patent, unless the *combination* has existed before, for the reason, that the invention is limited to the combination. And yet if the combination be not wholly new, but up to a certain point has existed before, and the patentee claims the whole combination as new, instead of his own improvements only, as by taking out a patent for the whole machine, doubtless his patent is void, for it exceeds his invention. (Bovill *v.* Moore, 2 Marsh. R. 211; Davies on Pat. 361, 398, 404, 411.) But if there be different and distinct improvements constituting parts of the combination, which are specified as such in the patent and specification, and any one of them be pirated, the same rule seems

improvement of a machine is the same thing as a patent for an improved machine.[1] Improvement, applied to machinery, is where a specific machine already exists, and an addition or alteration is made, to produce the same effects in a better manner, or some new combinations are added, to produce new effects.[2] In such cases, the patent can only be for the improvement, or new combination.[3] The great question, of course, when an alleged invention purports to be an improvement of an existing machine, is to ascertain whether it be a real and material improvement, or only a change of form. In such cases, it is necessary to ascertain with as much accuracy as the nature of such inquiries admits, the boundaries between what was known and used before, and what is new, in the *mode of operation*.[4] The inquiry therefore must be, not whether the same elements of motion, or the same component parts are used, but whether the given effect is produced substantially by the same mode of operation, and the same combination of powers, in both machines; or whether some new element, combination, or feature has been added to the old machine, which produces either the same effect in a cheaper or more expeditious manner, or an entirely new effect, or an effect that is in some material respect superior, though in other respects similar to that produced by the old machine.[5]

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to apply, as in other cases where part of an invention is pirated, for the patent then shows that the invention is not limited to the mere combination, but includes the particular improvements specified." See also Evans *v.* Eaton, 1 Peters's Circ. C. R. 343; Evans *v.* Eaton, 3 Wheat. 454, 476, 506; Prouty *v.* Draper, 1 Story, 568; Prouty *v.* Ruggles, 16 Peters, 336; Howe *v.* Abbott, 2 Story's R. 190; Bean *v.* Smallwood, 2 Story's R. 408.

[1] Per Heath, J., in Boulton *v.* Bull, 2 H. Bl. 463, 482; and per Story, J., in Barrett *v.* Hall, 1 Mas. 475.

[2] Whittemore *v.* Cutter, 1 Gallis. 480.

[3] Ibid; Odiorne *v.* Winkler, 2 Gallis. 51.

[4] Whittemore *v.* Cutter, 1 Gallis. 478, 481. Whether an improvement is trifling and insignificant, or real and important, is a question for the jury. Losh *v.* Hague, Webs. Pat. Cas. 205.

[5] Whittemore *v.* Cutter, 1 Gallis. 478; Brunton *v.* Hawkes, 4 B. & Ald. 540.

§ 96. This inquiry will therefore often involve the question, whether the alleged improved machine operates upon the same principle as the former machine; or in other terms, whether it produces the same effect by the same mechanical means, or by means which are substantially the same. One machine may employ the same mechanical power in the same way as another machine, though the external mechanism may be apparently different. At the same time a machine may have an external resemblance to another, and yet may operate upon a different principle.[1] It is therefore necessary, where the effect is the same, to determine whether the *modus operandi*, the peculiar device or manner of producing the effect, is substantially the same. Where the effect is different, the test of a sufficient "improvement," to sustain a patent will be the character and importance of the effect itself.[2]

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[1] Barrett *v.* Hall, 1 Mas. 470. In this case, Mr. Justice Story said, "The true legal meaning of the principle of a machine, with reference to the patent act, is the peculiar structure or constituent parts of such machine. And, in this view, the question may be very properly asked, in cases of doubt or complexity, of skilful persons, whether the principles of two machines be the same or different. Now, the principles of two machines may be the same, although the form or proportions may be different. They may substantially employ the same power in the same way, though the external mechanism be apparently different. On the other hand, the principles of two machines may be very different, although their external structure may have great similarity in many respects. It would be exceedingly difficult to contend, that a machine, which raised water by a lever, was the same in principle with a machine, which raised it by a screw, a pulley or a wedge, whatever in other respects might be the similarity of the apparatus."

[2] Whittemore *v.* Cutter, 1 Gallis. 478, 479, 480, 481. In this case the same learned judge remarked, "It is difficult to define the exact cases, when the whole machine may be deemed a new invention, and when only an improvement of an old machine; the cases often approach very near to each other. In the present improved state of machinery, it is almost impracticable not to employ the same elements of motion, and in some particulars, the same manner of operation, to produce any new effect. Wheels, with their known modes of operation and known combinations, must be of very extensive employment in a great variety of new machines, and if they could not, in the new invention, be included in the patent, no patent could exist for a whole machine embracing such mechanical powers.

§ 97. There may be a patent for an improvement of a machine that is itself the subject of an existing patent. It has

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Where a specific machine already exists producing certain effects, if a mere addition is made to such machine, *to produce the same effects* in a better manner, a patent cannot be taken for the whole machine, but for the improvement only. The case of a watch is a familiar instance. The inventor of the patent lever, without doubt, added a very useful improvement to it; but his right to a patent could not be more extensive than his invention. The patent could not cover the whole machine as improved, but barely the actual improvement. The same illustration might be drawn from the steam engine, so much improved by Messrs. Watt and Boulton. In like manner, if to an old machine, some new combinations be added, to produce *new effects*, the right to a patent is limited to the new combinations. A patent can, in no case, be for an effect only, but for an effect produced in a given manner, or by a peculiar operation. For instance, no patent can be obtained for the admeasurement of time, or the expansive operations of steam; but only for a new mode or new application of machinery, to produce these effects; and therefore, if new effects are produced by an old machine in its unaltered state, I apprehend that no patent can be legally supported; for it is a patent for an effect only.

On the other hand, if *well-known effects* are produced by machinery in all its combinations *entirely new*, a patent may be claimed for the whole machine. So if the principles of the machine are new, either to produce a new or an old effect, the inventor may well entitle himself to the exclusive right of the whole machine. By the principles of a machine, (as these words are used in the statute) is not meant the original elementary principles of motion, which philosophy and science have discovered, but the *modus operandi*, the peculiar device or manner of producing any given effect. The expansive powers of steam, and the mechanical powers of wheels, have been understood for many ages; yet a machine may well employ either the one or the other, and yet be so entirely new, in its mode of applying these elements, as to entitle the party to a patent for his whole combination. The intrinsic difficulty is to ascertain, in complicated cases like the present, the exact boundaries between what was known and used before, and what is new, *in the mode of operation*.

The present machine is to make cotton and woolen cards. These were not only made before the present patent, by machinery, but also by machinery, which, at different times, exhibited very different stages of improvement. The gradual progress of the invention, from the first rude attempts to the present extraordinary perfection, from the slight combination of simple principles to the present wonderful combinations, in ingenuity and intricacy scarcely surpassed in the world, has been minutely traced by the witnesses on the stand.

been held in England, that a patent including the subject-matter of a patent still in force, is valid, if the improvement only is claimed in the specification. In such cases, the new patent will come into force, after the expiration of the old one, or it may be applied by using a license under the former patent, or by purchasing the specific machine which the former patent covers, before the expiration of the latter.[1]

The jury then are to decide, whether the principles of Mr. Whittemore's machine are altogether new, or whether his machine be an improvement only on those, which have been in use before his invention. I have before observed, that the principles are *the mode of operation.* If the same effects are produced by two machines by the same mode of operation, the principles of each are the same. If the same effects are produced, but by combinations of machinery operating substantially in a different manner, the principles are different."

[1] Crane *v.* Price, Webs. Pat. Cas. 393, 413. In this case, Sir W. C. Tindall, C. J., said, "Now it is further argued, that in point of law, no patent can be taken out which includes the subject-matter of a patent still running or in force. No authority was cited to support this proposition, and the case which was before Lord Tenterden, and in which he held, that where an action was brought for an infringement of improvements in a former patent granted to another person, and still in force, that the plaintiff must produce the former patent and specification: that at least affords a strong evidence that the second patent was good. (Lewis *v.* Davis, 3 Car. & P. 502.) The case of *Harmar* v. *Playne*, (14 Ves. jr., 130; 11 East, 101; Dav. Pat. Cas. 311; Fox, *ex parte*, 1 Ves. & B. 67,) is a clear authority on the same point; and upon reason and principle there appears to be no objection. The new patent, after the expiration of the old one, will be free from every objection, and whilst the former exists, the new patent can be legally used by the public by procuring a license from Neilson, or by purchasing the apparatus from him, or some of his agents; and the probability of the refusal of a license to any one applying for it, is so extremely remote, that it cannot enter into consideration as a ground of legal objection."

See also Fox, *ex parte*, 1 V. & B. 67. Mr. Webster puts this very clear illustration: "For suppose a particular article, starch for instance, to be the subject of letters-patent, and that all the starch in the country was patent starch; there are attached to the making and selling of that article certain exclusive privileges; but the individual who has purchased it of the patentee has a right to sell it again, and to use it at his will and pleasure; the exclusive privileges are in respect of that particular portion of the article so sold, at an end, and do not pursue it through any subsequent stage of its use and

§ 98. It has also been held, that in an action for an infringement of a patent professing to be an improvement on a former patent, the specification of that former patent must be read. But it is not material whether a machine, made according to that specification of the first patent, would be useful or not, if it be shown that a machine, constructed according to the subsequent patent, is useful.[1]

§ 99. In all cases of alleged improvements in machinery, the test of sufficiency may be found in the dictum of Buller J., that, "if there be anything material and new, that will be an improvement of the trade, that will be sufficient to support a patent."[2]

§ 100. III. A MANUFACTURE. It has been stated in a former part of this chapter, that the term "manufacture" was used in the English statute, 21 Jac. 1, to denote anything made by the hand of man; so that it embraces, in the English law, machinery, as well as substances or fabrics produced by art and industry.[3]

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existence, otherwise every purchaser of starch would be obliged, according to the terms of the letters-patent, to have a license in writing, under the hand and seal of the patentee; the absurdity of which is manifest. Hence it is obvious, that if a person legally acquires, by license or purchase, title to that which is the subject of letters-patent, he may use it or improve upon it in whatever manner he pleases; in the same manner as if dealing with property of any other kind."

[1] Lewis *v.* Davis, Webs. Pat. Cas., 488, 489.

[2] The King *v.* Arkwright, Webs. Pat. Cas., 71.

[3] In Boulton *v.* Bull, HEATH J. said, "The statute 21 Jac. 1, prohibits all monopolies, reserving to the King by an express proviso, so much of his ancient prerogative, as shall enable him to grant letters patent and grants of privilege, for the term of fourteen years and under, 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*. What then falls within the scope of the proviso? Such manufactures as are reducible to two classes. The first includes machinery, the second substances, (such as medicines) formed by chemical and other processes, where the vendible substance is the thing produced, and that which operates preserves no permanent form. In

§ 101. We have seen also that it came, by construction, to include the process of making a thing, or the art of carrying on a manufacture; so that all the various objects, which are now held in England to be the subjects of letters-patent, are included under this term, which alone saves them out of the prohibition of the statute of monopolies.[1]

§ 102. Our statute, however, having made an enumeration of the different classes of subjects which in England are held to be patentable, it is to be presumed that this term was used to describe one of these classes only, namely, fabrics or substances made by the art or industry of man, not being machinery.[2] It

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the first class the machine, and in the second the substance produced, is the subject of the patent. I approve of the term *manufacture* in the statute, because it precludes all nice refinements; it gives us to understand the reason of the proviso, that it was introduced for the benefit of trade. That which is the subject of a patent, ought to be specified, and it ought to be that which is vendible, otherwise it cannot be a manufacture."

In Hornblower *v.* Boulton, 8 T. R. 99, Lord Kenyon defined the term as "something made by the hands of man." In the King *v.* Wheeler, 2 B. & Ald. 349, Abbott L. C. J. defined it thus: "The word "manufactures" has been generally understood to denote either a thing made, which is useful for its own sake, and vendible as such, as a medicine, a stove, a telescope, and many others, or to mean an engine or instrument, or some part of an engine or instrument, to be employed, either in the making of some previously known article, or in some other useful purpose, as a stocking frame, or a steam engine for raising water from mines. Or it may perhaps extend also to a new process to be carried on by known implements, or elements, acting upon known substances, and ultimately producing some other known substance, but producing it in a cheaper or more expeditious manner, or of a better and more useful kind."

[1] Ante § 69, 71, 72, 73, 74. See also Hindmarch on Patents, p. 80.

[2] Perhaps the best general definition of the term "manufacture," as the subject of a patent, would be any new combination of old materials, constituting a new result or production, in the form of a vendible article, not being machinery. In one sense, all materials are old; as the amount of matter in existence does not depend on the will or the skill of man, whatever he uses is, in one sense, an old material. In this sense, therefore, all that he does, in producing a new manufacture, is to bring old materials into a new combination, and by so doing to produce a new result in matter. It is this new

may sometimes require a nice discrimination, to determine whether one of these classes does not run into the other, in a given case; as for instance, when a tool or instrument of a novel or improved construction is produced, to be used in connection with other machinery, or to be used separately. As an article of merchandise, found and sold separately in the market, such a production would be a manufacture; but regarded with reference to its use and intended adaptation, it might be considered as a machine, or part of a machine. In determining, in such cases, how the patent for the article should be claimed, it would probably be correct to range it under the one or the other of these classes, according to the following test. If the article is produced and intended to be sold and used separately, as a merchantable commodity, and the merit of it, as an invention, consists in its being a better article than had been before known, or in its being produced by a cheaper process, then it may properly be considered simply as a manufacture. But if its merit appears only after its incorporation with some mechanism with which it is to be used, and consists in producing, when combined with such mechanism, a new effect, then it should be regarded as a machine, or an improvement of an existing machine. These distinctions, however, are not vitally important to be taken in the patent itself, since it is not necessary to the validity of a patent, that the thing should be described with entire accuracy as "a machine" or "a manufacture." If the thing itself is correctly described, and it appears to be novel and useful, and unites all the other requisites of the statute, it may be left to general interpretation to determine, whether the subject-matter ranges itself under the one or the other of these classes, or whether it partakes of the characteristics of both. But if the

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combination, carried into, or evinced by a new result or production, that is the subject of a patent. The use of all the materials in other combinations, may have been known before; but if they are used in a new combination, producing a new result, there will be a good subject for a patent for a "manufacture," as there is in respect to "machinery" when the same thing is effected. See Cornish *v.* Keene, Webs. Pat. Cas. 512, 517.

subject-matter be neither a machine, nor a manufacture, or composition of matter, then it must be an art. There can be no valid patent, except it be for a thing made, or for the art or process of making a thing.

§ 103. IV. A Composition of Matter. The last class of patentable subjects mentioned in the statute is described by the term "composition of matter." It includes medicines, compositions used in the arts, and other combinations of substances intended to be sold separately. In such cases, the subject-matter of the patent may be either the composition itself, the article produced, or it may be the mode or process of compounding it. Generally speaking, the patent covers both, because if the composition is itself new, the process by which it is made must also be new, and the law will protect both as the subjects of invention. But if the article itself be not new, but the patentee has discovered merely a new mode or process of producing it, then his patent will not be for a new "composition of matter," but for a new "art" of making that particular thing.

§ 104. With regard to this class of subjects, it is sufficient to observe, that the test of novelty must, of course, be, not whether the materials of which the composition is made, are new, but whether the combination is new. Although the ingredients may have been in the most extensive and common use, for the purpose of producing a similar composition, if the composition made by the patentee is the result of different proportions of the same ingredients, or of the same and other ingredients, the patent will be good.[1] The patentee is not confined to the use of the same precise ingredients in making his compound, provided all the different combinations of which he makes use are equally new.[2]

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[1] Ryan *v.* Goodwin, 3 Sumner's R. 514, 518.

[2] Ibid.

§ 105. A new class of objects has, by a recent statute, been made the subjects of letters-patent. These are new and original *Designs* for a manufacture of metal and other materials; for the printing of woollen, silk, cotton or other fabrics; for busts, statues or bas-relief, or composition in alto or basso-relievo; for any impression or ornament, or to be placed on any article of manufacture in marble or other material; for any new and useful pattern, print or picture, to be in any manner attached to, or fixed on any article of manufacture; for any new or original shape or configuration of any article of manufacture; all such designs not being previously known or used by others. Patents for these subjects are to be issued on the like application and proceedings, as those prescribed in other cases of patents, for the term of seven years, and on payment of one half the fee required by the general patent act.[1]

§ 106. The patents thus granted relate to the forms impressed upon the material constituting particular articles of manufacture, and to the marks adopted by tradesmen, whether patterns, prints or pictures, to distinguish their own manufactures. They thus occupy a kind of middle ground between copyrights and patents, as patents for useful inventions have hitherto been classed. Indeed, the exclusive right to impress upon matter a particular form, or to affix a particular device to a bale of merchandise, is very closely analogous to the exclusive right to print a particular book or engraving, if it is not precisely the same right. The same general principles, at least, must be resorted to, to determine the identity between two forms of matter, as forms, or between two devices, as devices, which

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[1] Act of Cong. Aug. 29, 1842, § 3, 5. This is an act in addition to the general Patent Act of 1836: but the 5th section provides an action for penalties, for the infringement of this class of patentable subjects, in place of the action for damages provided in respect of other patents by the act of 1836. The remedy in equity, by injunction, is not expressly granted; but it exists undoubtedly, both by force of the provision in the Act of 1836, § 17, and of the general principles of equity jurisprudence.

determine the identity of two books or engravings. The leading principle, in such comparisons, is that which shows that the one thing is a colorable imitation of another, when there is not an exact resemblance; and although this principle has its place in that system of patent law, which is applied to machinery, arts, manufactures or compositions of matter, it is more fully developed and of more frequent application in the law of copyright, as applied to books and engravings.[1]

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[1] These principles may be found developed in a work, in which I have endeavored to state the Law of Copyright.

CHAPTER III.

UNITY OF THE SUBJECT-MATTER.

§ 107. The several Acts of Congress on the subject of Patents, evidently require that the subject-matter of a patent should be one invention or discovery. The Act of 1836, c. 357, § 6, speaks of an invention or discovery as the subject of a patent, and not of inventions or discoveries; and throughout this and the subsequent statutes, the subject-matter is always described or referred to in the singular and not in the plural. It is, therefore, an important inquiry, how far several distinct things can be made the subject of one patent.

§ 108. In the first place, it is manifest that where there are two distinct and independent inventions, which have no necessary connection with each other, but which are applicable to different objects and purposes, they cannot be united in one patent; for the statute affords no warrant for including more than one subject-matter in one patent. In the second place, if two distinct subject-matters could be included in one patent, great inconvenience and confusion would arise, both to the patentee and the public, from the application of the rule of law which renders void the whole patent, where a part of the subject-matter turns out not to be original. Still, these positions do not determine when several apparently distinct objects constitute one subject-matter; or whether there is any leading principle which will enable us to draw the line between one collection of objects as constituting one subject-matter, and another collection of objects as constituting more than one subject-matter.

§ 109. The object which the inventor proposes to accomplish will always be the main guide, by which to determine whether his subject-matter is a unit or not. It may consist of several distinct inventions, or several machines capable of useful operation separately; but if the inventor has brought them together for a purpose which can only be effected by their union, that purpose indicates the true character of the subject-matter, when they are included in one patent, which goes for the accomplishment of that purpose. But if the patent goes for the combination, or the purpose to be effected by the several inventions united in one operation, and also goes for the distinct purposes which each invention is, by itself, capable of effecting, it is clear, that several subject-matters are embraced in one patent.[1]

§ 110. If, indeed, the patentee describes several distinct and independent parts of an invention, which are intended to be used in combination, and he is the first and original inventor of each of them, his patent will cover all the parts as well as the combination, and the use of any one of them by another person, will be an infringement. But where the patentee is not the inventor of the several things used in the combination, but the combination itself is the true subject-matter of his patent, then the use of any number of those things not amounting to the same combination, is no infringement.[2]

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[1] In Barrett *v.* Hall, 1 Mas. 447, 475, Mr. Justice Story laid down the doctrine thus: "A patent under the general Patent Act, cannot embrace various distinct improvements or inventions; but in such case the party must take out separate patents. If the patentee has invented certain improved machines, which are capable of a distinct operation, and also has invented a combination of those machines to produce a connected result, the same patent cannot at once be for the combination and for each of the improved machines; for the inventions are as distinct as if the subjects were entirely different. A very significant doubt has been expressed on this subject by the Supreme Court; and I am persuaded that the doubt can never be successfully removed." See Evans *v.* Eaton, 3 Wheat. 454, 506.

[2] In Moody *v.* Fiske, 2 Mas. 112, 117, the same learned judge said: 'Where the patent goes for the whole of a machine as a new invention, and

§ 111. It has also been held that a patent may be taken for several improvements on one and the same machine, or for two

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the machine is in its structure substantially new, any person who pirates a part of the machine, substantially new in its structure, deprives the inventor so far of his exclusive right in his invention, and may, in a great measure, destroy the value of the patent. When the patent is for several improvements in an existing machine, or for an improved machine, incorporating several distinct improvements, which are clearly specified, then if a person pirates one of the improvements, he violates the exclusive right of the patentee, for the patent is as broad as the invention, and the invention covers all the improvements; and it is a wrong done to the patentee to deprive him of his exclusive right in any of his improvements. Where the patent is for a *new combination* of existing machinery, or machines, and does not specify or claim any improvements or invention, except the combination, unless that combination is substantially violated, the patentee is not entitled to any remedy, although parts of the machinery are used by another, because the patent, by its terms, stands upon the *combination* only. In such a case, proof that the machines, or any part of their structure existed before, forms no objection to the patent, unless the *combination* has existed before, for the reason, that the invention is limited to the combination. And yet if the combination itself be not wholly new, but, up to a certain point, has existed before, and the patentee claims the whole combination as new, instead of his own improvements only, as by taking out a patent for the whole machine, doubtless his patent is void, for it exceeds his invention. But if there be different and distinct improvements constituting parts of the combination, which are specified as such in the patent and specification, and any one of them be pirated, the same rule seems to apply as in other cases where part of an invention is pirated, for the patent then shows that the invention is not limited to the mere combination, but includes the particular improvements specified.

It is often a serious difficulty, from the obscure language of the specification, to ascertain what is the nature and extent of the invention claimed by the patentee. Whether his patent be valid or not, must materially depend upon the accuracy and distinctness with which the invention is stated. But in all cases where the patentee claims anything as his own invention, in his specification, courts of law cannot reject the claim; and if included in the patent, and found not to be new, the patent is void, however small or unimportant such asserted invention may be. This leads me to the first point made at the bar; as to which, it appears to me clear, both upon principle and authority, that where a patentee in his specification states and sums up the particulars of his invention, and his patent covers them, he is confined to such summary; and he cannot afterwards be permitted to sustain his patent

machines, which are invented by the patentee, and conduce to the same common purpose and object, although they are capable of a distinct use and application, without being united together. But a patent cannot be taken for two distinct machines not conducing to the same common purpose or object, but designed for totally distinct and independent objects.' Hence,

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by showing that some part which he claims in his summing up as his invention, though not in fact his invention, is of slight value or importance in his patent. His patent covers it; and if it be not new, the patent must be void. Here the plaintiff claims a particular position of machinery as his invention, and it clearly appears in evidence, that the position is not new. It has existed before, not in machines exactly like the present, but in machines applied to analogous purposes, viz., in machines for roping cotton; and applied for the same purpose as the plaintiff applies them. Without doubt, he supposed that he was the first inventor, but that was his mistake, and will not help the case. The objection therefore is fatal. I wish it to be understood in this opinion, that though several distinct improvements in one machine may be united in one patent, it does not follow that several improvements in two different machines, having distinct and independent operations, can be so included. Much less that the same patent may be for a *combination* of different machines, and for distinct improvements in each."

[1] In Wyeth *v.* Stone, 1 Story's R. 273, 287, Mr. Justice Story said: "But it has been said, that if each of the machines patented is independent of the other, then separate patents should have been taken out for each; and that they cannot both be joined in one and the same patent; and so there is a fatal defect in the plaintiff's title. And for this position the doctrine stated in Barrett *v.* Hall, 1 Mason, R. 473, and Evans *v.* Eaton, 3 Wheat. R. 454, 506, (see also Phillips on Patents, pp. 214, 215, 216) is relied on. I agree, that under the general patent acts, if two machines are patented, which are wholly independent of each other, and distinct inventions, for unconnected objects, then the objection will lie in its full force, and be fatal. The same rule would apply to a patent for several distinct improvements upon different machines, having no common object or connected operation. For, if different inventions might be joined in the same patent for entirely different purposes and objects, the patentee would be at liberty to join as many as he might choose, at his own mere pleasure, in one patent, which seems to be inconsistent with the language of the patent acts, which speak of the thing patented, and not of the things patented, and of a patent for an invention, and not of a patent for *inventions*; and they direct a specific sum to be paid for each patent. Besides: there would arise great difficulty in applying the doctrine of the common law to such cases. Suppose one or more of the supposed inventions was not new, would the patent at the

it would seem to follow that where a patentee has invented two distinct and different machines, each of which will accomplish

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common law be void in toto, or only as to that invention, and good for the rest? Take the case of a patent for ten different machines, each applicable to an entirely different object, one to saw wood, another to spin cotton, another to print goods, another to make paper, and so on; if any one of these machines were not the invention of the patentee, or were in public use, or were dedicated to the public, before the patent was granted, upon the doctrines of the common law, the patent would be broader than the invention, and then the consideration therefor would fail, and the patent be void for the whole. But if such distinct inventions could be lawfully united in one patent, the doctrine would lead to consequences most perilous and injurious to the patentee; for, if any one of them were known before, or the patent as to one of them was void, by innocent mistake, or by priority of invention, that would take away from him the title to all the others, which were unquestionably his own exclusive inventions. On the other hand, if the doctrine were relaxed, great inconvenience and even confusion might arise to the public, not only from the difficulty of distinguishing between the different inventions stated in the patent and specification, but also of guarding themselves against fraud and imposition by the patentee, in including doubtful claims under cover of others, which were entirely well founded. In construing statutes upon such a subject, these considerations are entitled to no small weight. At least, they show that there is no ground, founded in public policy, or in private right, which calls for any expanded meaning of the very words of the statute; and that to construe them literally is to construe them wisely. It is plain, also, that the Act of 1837, ch. 45, in the ninth section, contemplated the rule of the common law as being then in full force: and therefore, it seeks to mitigate it, and provides, 'that whenever, by mistake, accident, or inadvertence, and without any intent to defraud or mislead the public, any patentee shall have, in his specification, claimed to be the original and first inventor or discoverer of any material or substantial part of the thing invented,' (not of different things invented) 'of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be good and valid for so much of the invention or discovery,' (not inventions or discoveries) 'as shall be truly and *bonâ fide* his own; provided it shall be a material and substantial part of the thing patented, and be definitely distinguishable from the other parts, so claimed without right as aforesaid.' This language manifestly points throughout to a definite and single invention, as the 'thing patented,' and does not even suppose, that one patent could lawfully include divers distinct and independent inventions, having no common connection with each other, nor any common purpose.

the same end, he may unite them in one patent, as being distinct modes by which he contemplates the application of his

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It may, therefore, fairly be deemed a legislative recognition and adoption of the general rule of law in cases, not within the exceptive provision of the Act of 1837.

And this is what I understand to have been intended by the court in the language used in Barrett *v.* Hall, 1 Mason, 447, 475, 478. It was there said, (p. 475) that "a patent under the general Patent Act cannot embrace various distinct improvements and inventions; but in such a case the party must take out separate patents. If the patentee has invented certain improved machines, which are capable of a distinct operation, and has also invented a combination of these machines to produce a connected result, the same patent cannot at once be for the combination, and for each of the improved machines; for the inventions are as distinct as if the subjects were entirely different." And again, (p. 478,) "If the patent could be constructed as a patent for each of the machines severally, as well as for the combination, then it would be void, because two separate inventions cannot be patented in one patent." It is obvious, construing this language with reference to the case actually before the court, that the court were treating of a case, where each of the patented machines might singly have a distinct and appropriate use and purpose, unconnected with any common purpose, and therefore each was a different invention. In Moody *v.* Fiske, 2 Mason, 112, 119, the judge alluded still more closely to the distinction, and said: "I wish it to be understood, in this opinion, that though several distinct improvements in one machine may be united in one patent; (yet) it does not follow, that several improvements in two different machines, *having distinct* and independent operations, can be so included; much less, that the same patent may be for a combination of different machines, and for distinct improvements in each." It is perhaps impossible to use any general language in cases of this sort, standing almost upon the metaphysics of the law, without some danger of its being found susceptible of an interpretation beyond that, which was then in the mind of the court. The case intended to be put in each of these cases was of two different machines, each applicable to a distinct object and purpose, and not connected together for any common object or purpose. And, understood in this way, it seems to me, that no reasonable objection lies against the doctrine.

Construing, then, the present patent to be a patent for each machine, as a distinct and independent invention, but for the same common purpose, and auxiliary to the same common end, I do not perceive any just foundation for the objection made to it. If one patent may be taken for different and distinct improvements made in a single machine, which cannot well be doubted or denied, how is that case distinguishable in principle from the present?

invention, one of them being preferable in certain circumstances to the other, and *vice versa*. In this way, the unity of the subject-matter is preserved; for the subject-matter consists, in such a case, of the object to be accomplished, and of the several modes by which it may be accomplished.

§ 112. There is also another aspect in which what we have called the unity of a patent must be preserved. It is impossible

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Here, there are two machines, each of which is or may be justly auxiliary to produce the same general result, and each is applied to the same common purpose. Why, then, may not each be deemed a part or improvement of the same invention? Suppose the patentee had invented two distinct and different machines, each of which would accomplish the same end, why may he not unite both in one patent, and say, I deem each equally useful and equally new, but, under certain circumstances, the one may, in a given case, be preferable to the other? There is a clause in the Patent Acts, which requires, that the inventor, in his specification or description of his invention, should "fully explain the principle and the several modes, in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions." Now, this would seem clearly to show, that he might lawfully unite in one patent all the modes, in which he contemplated the application of his invention, and all the different sorts of machinery, or modifications of machinery, by which, or to which it might be applied; and if each were new, there would seem to be no just ground of objection to his patent, reaching them all. (Act of 1793, ch. 55, § 3; Act of 1836, ch. 357.) *A fortiori*, this rule would seem to be applicable, where each of the machines is but an improvement or invention conducing to the accomplishment of one and the same general end.

But let us take the case in another view, (of which it is certainly susceptible,) and consider the patent as a patent, not for each machine separately, but for them conjointly, or in the aggregate, as conducing to the same common end; if each machine is new, why may they not both be united in one patent, as distinct improvements? I profess not to see any good reason to the contrary. If they may be so united, and were both new, then, upon the principles established in Moody *v.* Fiske, (2 Mason's R. 112, 117, 118, 119,) it is not necessary, in order to maintain a suit, that there should be a violation of the patent throughout. It is sufficient, if any one of the invented machines or improvements is wrongfully used; for that, *pro tanto*, violates the patent. In this view, therefore, the use of the cutter of the inventor, without any use of the saw, would be a sufficient ground to support the present bill, if it were not otherwise open to objection."

that any invention should have been produced both as the separate invention of a party, and as the joint invention of the same party and another or others. It must have been either the separate and sole invention of the party, or the joint invention of the same party, acting with others. A joint invention may be a good subject-matter of a patent, for the statute supposes the case of a joint invention and provides for it. But if an invention, which, in point of fact, was made by more than one person, is made the subject of a patent by any one of them, he cannot take the oath required by the statute, declaring himself to be the original and first inventor, or, if he does take it, his patent will be void. On the other hand, if his invention was the sole production of one party, a joint patent for it encounters the same objection. It is necessary, therefore, in all cases, that the subject-matter should be claimed as the sole invention of one party, if such is the fact, or as the joint invention of two or more parties, if it was invented by more than one.[1]

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[1] In Barrett *v.* Hall, 1 Mas. 447, 472, the reasons are thus stated; "In the first place, a joint patent may well be granted upon a joint invention. There is *no difficulty in supposing in point of fact*, that a complicated invention may be the gradual result of the combined mental operations of two persons acting together, *pari passu*, in the invention. And if this be true, then as neither of them could justly claim to be the sole inventor in such a case, it must follow, that the invention is joint, and that they are jointly entitled to a patent. And so are the express words of the patent act (Act of 21st February, 1793, ch. 11, § 1,) which declares, that if any person or persons shall allege, that he or they have invented, &c., a patent shall be granted to him or them for the invention.

In the next place, a joint patent cannot be sustained upon a sole invention of either of the patentees, for the patent act gives no right to a patent, except to the inventors, and requires an oath from the party, who claims a patent, that he is the true inventor.

In the next place, a joint patent for an invention is utterly inconsistent with several patents for the same invention by the same patentees. For it is impossible, that any person can be, at the same time, the joint and the sole inventor of the same invention. If, therefore, each of the joint patentees obtain a several patent for the same invention, as his own exclusive invention; and afterwards, without surrendering the first patent, they obtain a joint patent for the same as a joint invention, either the former sole patents are

§ 113. An inventor cannot have two subsisting valid patents, at the same time, for the same invention. The first patent, while it remains in full force and unrepealed, is an estoppel to any subsequent patent by the same person for the same invention.[1]

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void, or the joint patent is void. For, besides the apparent inconsisteney of the patents, if all could be sustained, then a recovery upon the joint patent would be no bar to a suit upon the several patents; and the parties might obtain a double recompense for the same infringement. There is an additional reason, which deserves great consideration; and that is, that if sole and joint patents could be sustained by the same parties for the same invention, they might be successively taken out, so that the term of the exclusive right might be prolonged for a great length of time, instead of being limited to fourteen years. I am therefore clearly of opinion, that a grant of a subsequent patent for an invention is an estoppel to the patentee to set up any prior grant for the same invention, which is inconsistent with the terms of the last grant. And I have very great doubts, whether where a patent is once granted to any person for an invention, he can legally acquire any right under a subsequent patent for the same invention, unless his first patent be repealed for some original defect, so that it might truly be said to be a void patent.

In the next place, if several patents are taken out by several patentees for a several invention, and the same patentees afterwards take out a joint patent for the same as a joint invention, the parties are not absolutely estopped by the former patents from asserting the invention to be joint; but the former patents are very strong evidence against the joint invention. The reason of this doctrine is, not that estoppels are odious in the law, but that a party may innocently mistake, as to the extent of his own claims, and though a sole and joint invention, by the same persons of the same thing, cannot exist in fact, yet a party may suppose that he has invented, what in truth has been partly suggested by another mind."

[1] Odiorne *v.* The Amesbury Nail Factory, 2 Mason, 28. Barrett *v.* Hall, 1 Mason, 447, 473.

CHAPTER IV.

THE PERSONS ENTITLED TO TAKE, RENEW, OR EXTEND PATENTS.

§ 114. We have seen that the person or persons entitled to receive a patent can only be the inventor or inventors of the thing proposed to be patented. Our statute does not admit of a patent for the introduction of an invention from abroad, however meritorious. The patentee must be the inventor, and the original and first inventor.[1] But where the inventor has died before making application for a patent, the statute provides that the right of applying for and obtaining a patent shall devolve on his executor or administrator, in trust for his heirs or devisees, and that the oath or affirmation of original invention shall be varied accordingly.[2]

§ 115. As the statute is silent on the subject of citizenship, it follows; that an alien, who is the first and original inventor of any patentable subject, may apply for and obtain a patent, in the same manner as a citizen of the United States. The *eighth* section of the Act of 1836, c. 357, seems to contemplate the case of an application by an alien, by providing that the fact of a patent having been previously taken out in a foreign country, shall not debar the original and true inventor from a patent in the United States, where such foreign patent has not been taken out, and the invention published more than six months next before the filing of the specification and draw-

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[1] Reed *v.* Cutter, 1 Story's R. 590, 596; Act of 1836, c. 357, § 6.

[2] Act of 1836, c. 357, § 10.

ing.[1] The subsequent Act of 1839, c. 88, § 6, has somewhat altered this provision, by declaring that no person shall be debarred from receiving a patent, by reason of the invention having been patented in a foreign country more than six months prior to his application, *provided*, that the same shall not have been introduced into public and common use, in the United States, prior to the application for such patent.[2]

§ 116. So that under these two statutes, the rights of aliens are these. An alien, who is the original and first inventor of a patentable subject, may obtain a patent therefor in the United States, under the same circumstances as a citizen, if he has not patented his invention in a foreign country. If, however, he has taken out a patent for his invention and published the same abroad, if he applies for a patent in the United States, he can obtain it, provided the subject has not been introduced into public and common use in the United States, before his application, notwithstanding he may have received a patent for it abroad more than six months prior to his application here. But if his application in the United States is made within six months of the date or publication of his foreign patent, and yet the subject has in the meantime been introduced into public and common use in this country, it is not quite clear whether the statutes, taken together, mean to give him a patent, notwithstanding such public use, or whether they leave his case open to the general objection of a prior public use. It would seem to have been the intention of Congress, in these provisions, to leave the space of six months open to foreigners, where they are original and true inventors, and not to exclude them by reason of the introduction of their inventions within that period, commencing from the date of the patent or publication in a foreign country.[3]

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[1] Act of 1836, c. 357, § 8. The sixth section of the statute also contemplates the case of a patentee being an alien, by requiring the applicant to make oath of what country he is a citizen.

[2] Act of 1839, c. 88, § 6.

[3] In the case of interfering applications, where the question is one of

§ 117. The *eighteenth* section of the Act of 1836 provides for an extension of a patent beyond the term of its limitation, on the application of the patentee, in the mode therein prescribed. It has been determined, that an administrator is competent to apply for and receive this grant, although the patentee had disposed of all his interest in the then existing patent.[1]

§ 118. The question whether an assignee under the first term of the patent can claim or exercise any right or interest under the renewed patent has been much discussed; but it has been finally determined by a majority of the Supreme Court of the United States, that the extension does not enure to the benefit of assignees under the original patent, but to the benefit of the administrator, when granted to an administrator, in his capacity as such; but that assignees, who were in the use of the patented machine at the time of the renewal, have still a right to use it, though not to make and sell it.[2]

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priority of invention between an alien and a citizen of the United States, the date of the enrolment of the foreign patent, and not that of the sealing, is considered by the patent office as the date of the foreign patent, beyond which the foreign applicant is not permitted to go in order to prove the priority of his invention.

[1] Wilson *v.* Rousseau, 1 Howard, 646; Woodworth *v.* Sherman, 3 Story's R. 171, 172; Brooks *v.* Bicknell, 3 M'Lean R. 250, 255, 260; Woodworth *v.* Stone, 3 Story's R. 749.

[2] In Woodworth *v.* Sherman, 3 Story's R. 171, 173, Mr. Justice Story held that the assignee or grantee, under the original patent, does not acquire any right under the extended patent, unless such right be expressly conveyed to him by the patentee. The opinion delivered by him upon this point was as follows: "When these cases were heard before me at chambers, I expressed my opinion briefly on the three points made at the argument, not then having time to go into them at large. I do not desire to say anything further upon the first two points. But the last point involves a question of so much general importance, that it has appeared to me a duty, which I owe to the public, as well as to the parties, to give at large the reasons which influenced my opinion, and governed the decision. I do this the more readily, because I have not been able to find among my papers any statement, reduced by me to writing, of the particular circumstances attending the case in Maine, to which I have already alluded, or any report of the grounds on

§ 119. It was also held, in the same case, that a covenant by the patentee, made prior to the law authorizing extensions,

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which that decision was made. If I prepared, after the term, any written opinion, (of which I am not certain) it has been mislaid, and after considerable search, I have not been able to find any. I rather think, from my general recollection, that the question arose incidentally upon a renewed patent, granted by a special act of congress, after the first patent had regularly expired, and before the passage of the patent act of 1836, ch. 357. It may, perhaps, have been in a case involving the validity of the renewed patent, granted by the act of congress of 3d of March, 1835, to Eastman, for "a new and useful improvement, called the circular saw clapboard machine." But of this I am not quite sure, and I have not within my reach, at this moment, the means of verifying the conjecture. The doctrine, however, which I then held, was, that every license and assignment under the old laws, before the patent act of 1836, expired with the limitation of the original patent, unless it was expressly, in terms, so granted as to be applicable to any renewal of the patent afterwards; for, otherwise, the licensee's or assignee's right was necessarily bounded by the same limits as that of the licensor or assignee, that is to say, by the original term granted by the patent to the licensor or patentee. The doctrine proceeded upon the plain ground, affirmed by the common law, that a man can pass by a grant or assignment only that which he now possesses, and which is in existence at the time, either actually or potentially. His grant or assignment is, therefore, by its natural interpretation, limited to the rights and things which are then in existence, and which he has power to grant unless he uses other language, which imports an intention to grant what he does not now possess, and what is not now in existence. In the latter case, the language does not even then operate strictly as an assignment or grant, but only as a covenant or contract, which a court of equity will carry into full effect, when the right or thing comes *in esse*. Thus it is laid down in Comyn's Digest, (Assignments, c. 1, c. 2, c. 3; Id. Grant, D.) and better authority could not be, for, as was well observed by Lord Kenyon, he was the greatest lawyer of his day in all Westminster Hall, that an assignment or grant cannot, at law, be of a *chose in action*, bare right, or possibility. And in a case in Lord Hobart's Reports, it was said, that although a man may, by grant or assignment, assign all the wool then growing on the backs of the sheep then owned by him; yet he cannot grant or assign the wool that shall grow upon the backs of the sheep which he shall hereafter buy. (Grantham *v.* Hawley, Hob. R. 132.) And this doctrine was fully recognized by Lord Eldon in the case of *Curtis* v. *Amber*, 1 Jac. & Walk. 506, 512. But I need not dwell on this point, because it came under the full consideration of the court in *Mitchell* v. *Winslow*, 2 Story's R. 630, 639 to 644, where the principal au-

that the covenantee should have the benefit of any improvement in the machinery, or alteration, or renewal of the patent,

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thorities were collected and commented upon at large; so that the only remedy for the licensee or assignee, where a grant or assignment has been made to him and his heirs, of a right to a thing not then in existence, but which is to operate *in futuro*, when the right is created or comes *in esse*, is in equity, by way of specific enforcement of a covenant or contract. (See Story Eq. Jur. § 1040 to § 1041, 3d edit.

Now it appears to me, that this doctrine is expressly applicable to licenses and assignments under the patent act of 1836, and, indeed, as I think, *a fortiori* applicable, because the whole design of the 18th section of the act, providing for renewed patents, is, in its terms, exclusively confined to the original inventor, and to be for his sole benefit, and not for the benefit of his licensee or assignee; and, therefore, that section is to receive a correspondent construction in favor of the inventor alone, unless the particular clause of the section, which I shall presently consider, does, by natural or necessary implication, confer the right upon the licensee or assignee.

Let us, then, for this purpose, examine the 18th section of the Patent Act of 1836. It enacts, that, whenever any patentee (not any assignee) shall desire an extension of his patent beyond the term of its limitation, he may make application therefor to the commissioner of the patent office, setting forth the grounds thereof; and then, after prescribing the notice, &c., to be given of the application, it provides that the secretary of state, the commissioner of the patent office, and the solicitor of the treasury, shall constitute a board to hear and decide upon the evidence produced before them for and against the extension; and the patentee is required to furnish to the board a statement in writing, under oath, of the ascertained value of the invention, and of his receipts and expenditures, sufficient to exhibit a true and faithful account of loss and profit accruing from or by reason of the said invention. The section then proceeds to declare, that, "If, upon a hearing of the matter, it shall appear to the full and entire satisfaction of the board, having due regard to the public interest therein, that it is just and proper that the term of the patent should be extended by reason of the patentee, (not the assignee,) without neglect or fault on his part, having failed to attain from the use and sale of his invention a reasonable remuneration for the time, ingenuity, and expense bestowed upon the same, and the introduction thereof into use, it shall be the duty of the commissioner to renew and extend the patent, by making a certificate thereon of such extension, from the term of seven years from and after the expiration of the first term, &c.; and, therefore, the said patent shall have the same effect in law as though it had been originally granted for the term of twenty-one years." Now, bearing in mind, that, at this time, no patent could by law issue except

did not include the extension by an administrator, under the act of 1836; but that it must be construed to include only renewals

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to the inventor, and that it was only by the subsequent act of 3d of March, 1837, ch. 45, § 6, that it could be issued to the assignee, we have at once a perfect key to the true object and purpose of this 18th section of the act of 1836, that the word "patentee" is used therein, as equivalent to "inventor," and that the law looked to him as the sole object of its bounty, and meant to reward him and him alone, for his time, ingenuity, and expense in perfecting his invention. Another consideration is also important to be borne in mind; and that is, that the 18th section refers solely to applications to be made before the original patent has expired. Indeed, the very proviso to the section contemplated that the application not only may be, but must be made while the term of the original patent is yet running, and before it has expired; for it expressly declares "that no extension of a patent shall be granted after the expiration of the term for which it was originally issued." Now, keeping this in view, we see at once the object of the clause of the same section immediately preceding the proviso. It is in these words: "And the benefit of such renewal shall extend to assignees and grantees of the right to use the thing patented *to the extent of their respective interest therein*. The clause does not mean to enlarge the right of the assignees or grantees to use the thing patented beyond the extent of the interest originally granted to them. If that interest was, from its nature or character, or just interpretation, limited to the original term, for which the inventor held the patent, then the assignees and grantees were to have no benefit *ultra* in the renewed patent. But if the original assignment or grant had expressed in terms, or by just implication conferred on the assignees or grantees a right or interest in the renewed patent, then that interest was to be protected;-for it was a possibility, for the benefit of which the assignees or grantees had originally stipulated, and for which they must be presumed to have paid a valuable consideration. In this view of the matter, there would be good sense in the clause, founded upon the actual intentions of the parties to the original assignment or grant, upon a just interpretation of the language used by them. But what is the consequence of adopting a different interpretation of the clause, and applying it indiscriminately to all cases of grants and assignments of and under the original patent, where no such auxiliary intentions can be deduced from the language of the assignment of grant? Let us suppose the case, where an assignment has been made by the inventor of his whole patent right under his patent for a small, and (comparatively speaking) an utterly inadequate compensation, considering its real value, and this has been forced upon him by embarrassment, or poverty, or public indifference, or his own mistaken estimate of its value (a case by no means uncommon in the history of inventors) could it be for a

obtained upon the surrender of a patent on account of a defective specification.[1]

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moment imagined, that the 18th section intended, contrary to its professed object, to benefit, not the inventor himself, but his assignee? That the latter and not the former was to receive the whole profits accruing from the renewed patent? Or that, in such a case, the inventor would not be entitled to take out a renewed or extended patent? And yet, if the argument be worth anything, the 18th section applies as fully to such a case as it would apply to any *case*; and we cannot except it from the pressure of the section, unless we look broadly into the objects, which it purports to accomplish, and limit the language to cases, where the inventor has intended to part not merely with all his present rights, but prospectively with all the future rights and possibilities which he might acquire by a renewed or prolonged patent. Now, the words of the clause extend to the assignees and grantees of the right, (that is, of the patent right,) the benefit of the renewal "*to the extent of their respective interest therein;*" that is, of the patent right, and no more. Now, what is the extent of their interest therein? Clearly, upon the principles of the common law, neither more nor less than the assignor or grantor then possessed, and was capable of assigning or granting at the time of the assignment or grant, for to that the language of the grant or assignment must, in reason and good sense, be limited, unless the grantor or assignor has by express words or necessary implication shown a broader intention, an intention not merely to grant or assign the right, which he now possesses, but the possibilities, which he may hereafter acquire. And these are the best grounds to support such a limitation and interpretation of the grant or assignment.

In the first place, the grantor or assignor cannot be presumed to have received any compensation or consideration except for the very thing, and to the very extent which the language properly indicates. In the next place, no court is at liberty to add to the terms used any meaning beyond their ordinary import, unless there are some supplementary expressions to justify such a construction. In the present case, there is no ground to suppose, that either party contemplated, that the grant or assignment, or license was to be prolonged beyond the term of the original patent, and there are no words requiring a more expanded interpretation. In the next place, to give such an expanded interpretation, for which the inventor has received no consideration, would be to transfer the bounty intended by the government for the benefit of the inventor, whose genius had brought it out, and brought it to perfection, and who had not received a reasonable remuneration therefor, to the grantee or assignee, who had paid nothing and done nothing to deserve it, but had simply given the *quid pro quo* to the extent of the right or interest

[1] Ibid.

conferred upon him under the existing patent. The inventor may, from necessity or expediency, or otherwise, (as has been already suggested,) have conveyed his whole right and interest under the original patent, for a sum utterly unworthy of its intrinsic value. The grantee or assignee may have grown rich by the success of the inventor, and the inventor himself may be now languishing in poverty. Can it be, that the section, professing to intend a remuneration and bounty to the inventor, should, at the same time, have intended to sweep from him the future profits of the renewed invention. That if he should have parted with the half or two-thirds, or the whole of his rights and interests, under the original patent, he shall be narrowed down to a corresponding part, or excluded from all the profits of the renewed patent? If so, it would be but another sad illustration of the fate of genius. *Sic vos non vobis.* Besides; we are to recollect, that this section of the act of 1836, is not limited to cases of future patents, or to future grants or assignments thereof; but it applies to past also; and that the language, if applicable at all, reaches to both classes, the past as well as the future; and the present case is one of the prolongation of a patent issued long before the act of 1836. So that the section is thus made to apply to a case, where neither party could have contemplated any right of renewal, or any possibility of a future interest therein. The patentee had no right of renewal either *in esse* or *in posse*. The whole vested in the exercise of a sound discretion by Congress, which it would or might apply singly to the merits of each particular case, as it should be presented to them for consideration.

Now, if we construe the language of this clause with reference to the scope of the antecedent language, and the professed objects of the section, however loose and general it may, at first view, seem to be, it admits of an easy and satisfactory exposition. The right of assignees and grantees to use the thing patented, and to have the benefit of the renewal, is to be to the extent of their respective interests therein, and no more. If that interest was short of the whole of the original term, for which the patent was originally issued, it is not to reach the renewed term. If it was limited to the extent of the original term, it is still to be bounded by it. But if it is an interest in terms, designed to be coëxtensive with all the interest, which the patentee now has, or may hereafter acquire, not merely to his present rights *in esse*, but with his contingent rights *in posse*, then the section makes that a legal interest, which, otherwise, would be but a mere potential, equitable interest, to be enforced in equity, as a mere right under contract, and not as a fixed, present, vested interest. In this way, the whole structure of the section becomes harmonious with its professed objects, the benefit and remuneration of the inventor, and it saves only those rights in the renewed patent for which the inventor has already secured a compensation, and to which he has voluntarily extended his original grants and assignments, and licenses, to the very terms and intents thereof. Interpret the section in any other manner, and it speaks an intention in one part, which it contradicts or con-

trols in another. It takes from the inventor, what he never intended to part with, and may deprive him in part, or in the whole, according to circumstances, of the reward, which the section seemed so studiously to hold out to encourage his genius and skill, and to reimburse his expenditures.

These are some of the reasons which have influenced my mind in arriving at the conclusion which I have before stated. If they are erroneous, it will belong to the Supreme Court to correct the errors, and to adopt a rule, which adhering to a literal interpretation of the clause, may, at the same time, deprive the inventor of all motives to renew the patent, or make the renewal worthless to him, and injurious to the public."

Subsequently the Supreme Court of the United States, (McLean, Wayne, and Woodbury, Justices, dissenting,) in Wilson *v.* Rousseau, 4 Howard's R. 646, decided the point as stated in the text. Mr. Justice Nelson delivered the opinion of the Court as follows: "The second question is, whether, by force and operation of the eighteenth section already referred to, the extension granted to W. W. Woodworth, as administrator, on the 16th day of November, 1842, inured to the benefit of assignees under the original patent granted to William Woodworth, on the 27th day of December, 1828, or whether said extension inured to the benefit of the administrator only, in his said capacity. The most of this section has already been recited in the consideration of the first question, and it will be unnecessary to repeat it. It provides for the application of the patentee to the commission for an extension of the patent for seven years; constitutes a board to hear and decide upon the application; and if his receipts and expenditures, showing the loss and profits accruing to him from and on account of his invention, shall establish to the satisfaction of the board, that the patent should be extended by reason of the patentee, without any fault on his part, having failed to obtain from the use and sale of his invention a reasonable remuneration for his time, ingenuity, and expense bestowed upon the same, and the introduction of it into use, it shall be the duty of the commissioners to extend the same by making a certificate thereon of such extension for the term of seven years from and after the first term; 'and thereupon the said patent shall have the same effect in law as though it had been originally granted for the term of twenty-one years. And then comes the clause in question: — "*And the benefit of such renewal shall extend to assignees and grantees of the right to use the thing patented, to the extent of their respective interests therein.*"'

The answer to the second question certified depends upon the true construction of the above clause respecting the rights of assignees and grantees.

Various and conflicting interpretations have been given to it by the learned counsel, on the argument, leading to different and opposite results, which it will be necessary to examine. On one side, it has been strongly argued, that the legal operation and effect of the clause save and protect all the rights and interests of assignees and grantees in the patent existing at the time of the extension; and thus secure and continue the exclusive use and enjoy-

ment of these rights and interests for the seven years, to the same extent, and in as ample a manner, as held and enjoyed under the first term. That if A. holds an assignment of a moiety of the patent, he will hold the same for the new term of seven years; if of the whole patent, then the whole interest for that period. And that as soon as the new grant is made to the patentee, the interest therein passes, by operation of this clause, to the assignees of the old term in proportion to their respective shares. On the other side, it has been argued, with equal earnestness, that, according to the true construction and legal effect of the clause, protection is given, and intended to be given, only to the rights and interests of assignees and grantees acquired and held by assignments and grants from the patentee in and under the second or new term; and that it does not refer to, or embrace, or in any way affect the rights and interests of assignees or grantees holding under the old. In connection with this view, it is said that the rights thus protected in the new term may be acquired by means of the legal operation of the clause, either from a direct assignment or grant after the extension of the patent, or by an appropriate provision for that purpose, looking to an extension, contained in the assignment or grant under the old. It is not to be denied, but that, upon any view that has been taken, or that may be taken of the clause, its true meaning and legal effect cannot be asserted with entire confidence; and, after all, must depend upon such construction as the Court can best give to doubtful phraseology and obscure legislation, having a due regard to the great object and intent of Congress, as collected from the context and general provisions and policy of the patent law. The rule is familiar and well settled, that, in case of obscure and doubtful words or phraseology, the intention of the law-makers is to be resorted to, if discoverable from the context, in order to fix and control their meaning so as to reconcile it, if possible, with the general policy of the law.

Now the serious difficulty in the way, and which renders the first interpretation inadmissible, except upon the most explicit and positive words, is, that it subverts at once the whole object and purpose of the enactment, as is plainly written in every line of the previous part of the section. It gives to the assignees and grantees of the patent, as far as assigned under the old term, the exclusive right and enjoyment of the invention — the monopoly — in the extended term for the seven years; when, by the same provision, it clearly appears that it was intended to be secured to the patentee as an additional remuneration for his time, ingenuity and expense in bringing out the discovery, and in introducing it into public use. It gives this remuneration to parties that have no peculiar claims upon the government or the public, and takes it from those who confessedly have.

The whole structure of the eighteenth section turns upon the idea of affording this additional protection and compensation to the patentee, and to the patentee alone, and hence the reason for instituting the inquiry before the grant of the extension, to ascertain whether or not he has failed to realize a

reasonable remuneration from the sale and use of the discovery, — the production of an account of profit and loss to enable the board to determine the question ; and as it comes to the one or the other conclusion, to grant the extended term or not.

It is obvious, therefore, that Congress had not at all in view protection to assignees. That their condition, on account of dealing in the subject of the invention, whether successful or otherwise, was not in the mind of that body, nor can any good reason be given why it should have been. They had purchased portions of the interest in the invention, and dealt with the patent-rights as a matter of business and speculation ; and stood in no different relation to the government or the public, than other citizens engaged in the common affairs of life. Nothing short of the most fixed and positive terms of a statute could justify an interpretation so repugnant to the whole scope and policy of it, and to wise and judicious legislation. We think this construction not necessarily required by the language of the clause, and is altogether inadmissible.

Then, as to the second interpretation, namely, that the clause refers to, and includes, assignees and grantees of interests acquired in the new term, either by an assignment or grant from the patentee after the extension, or by virtue of a proper clause for that purpose, in the assignment under the old term. The difficulty attending this construction lies in the uselessness of the clause upon the hypothesis, — the failure to discover any subject-matter, upon which to give reasonable operation and effect to it, — and hence, to adopt the construction is to make the clause virtually a dead letter, the grounds for which conclusion we will proceed to state. The eleventh section of the Patent Act provides, that every patent shall be assignable, in law, either as to the whole interest, or any undivided part thereof, by an instrument in writing; which assignment, and also any grant and conveyance of the exclusive right under any patent, &c., shall be recorded in the patent office. And the fourteenth section authorizes suits to be brought in the name of the assignee or grantee, for an infringement of his rights, in a court of law.

One object of these provisions found in the general patent system is, to separate the interest of the assignee or grantee from that which may be held by the patentee, and to make each fractional interest held under the patent distinct and separate; in other words, to change a mere equitable into a legal title and interest, so that it may be dealt with in a court of law.

Now, in view of these provisions, it is difficult to perceive the materiality of the clause in question, as it respects the rights of assignees and grantees held by an assignment or grant in and under the new term, any more than in respect to like rights and interests in and under the old. The eleventh and fourteenth sections embrace every assignment or grant of a part or the whole of the interest in the invention, and enable these parties to deal with

it, in all respects, the same as the patentee. They stand upon the same footing, under the new term, as in the case of former assignments under the old. Nothing can be clearer. It is impossible to satisfy the clause by referring it to these assignments and grants; or to see how Congress could, for a moment, have imagined that there would be any necessity for the clause, in this aspect of it. It would have been as clear a work of supererogation as can be stated.

The only color for the argument in favor of the necessity of this clause, in the aspect in which we are viewing it, is, as respects the contingent interest in the new term, derived from a provision in an assignment under the old one, looking to the extension. As the right necessarily rested on contract, at least till the contingency occurred, there may be some doubt whether, even after its occurrence, the eleventh and fourteenth sections had the effect to change it into a vested legal interest, so that it could be dealt with at law; and that a new assignment or grant from the patentee would be required, which could be enforced only in a court of equity. To this extent there may be some color for the argument, — some supposed matter to give operation and effect to the clause.

But what is the amount of it? Not that the clause creates or secures this contingent interest in the new term, for that depends upon the contract between the parties, and the contract alone, and which, even if the general provisions of the law respecting the rights of assignees and grantees could not have the effect to change into a legal right, might be enforced in a court of equity. The only effect, therefore, of the provision in respect to assignees and grantees of this description would be, to change the nature of the contingent interest after the event happened, from a right resting in contract to a vested legal right; or, to speak with more precision, to remove a doubt about the nature of the interest in the new term, after the happening of a certain contingency, which event in itself was quite remote. This seems to be the whole amount of the effect that even ingenious and able counsel have succeeded in finding, to satisfy the clause. It presupposes that Congress looked to this scintilla of interest in the new term, which might or might not occur, and cast about to provide for it, for fear of doubts as to its true nature and legal character, and the effect of the general system upon it. We cannot but think a court should hesitate before giving a construction to the clause so deeply harsh and unjust in its consequences, both as it respects the public and individual rights and interests, upon so narrow a foundation.

But there are other difficulties in the way of this construction. The eleventh section, regulating the rights of assignees and grantees, provides "that every patent shall be assignable at law," &c. "which assignment, and also every grant and conveyance of the exclusive right under any patent to make and use, and to grant to others to make and use, the thing patented within and throughout any specified part or portion of the United States," &c. "shall be recorded."

Now it will he apparent, we think, from a very slight examination of the clause in question, that it does not embrace assignees or grantees, in the sense of the eleventh section, at all; nor in the sense in which they are referred to when speaking of these interests generally under the patent law, without interpolating words or giving a very forced construction to those composing it. The clause is as follows: "And the benefit of such renewal shall extend to assignees and grantees of the right to use the thing patented, to the extent of their respective interests therein."

It will be seen that the word "exclusive," used to qualify the right of a grantee in the eleventh section, and indeed, always when referred to in the patent law, (§ 14,) and also the words "to make," and to grant to others "to make and use," are dropped, so that there is not only no exclusive right in the grantee, in terms, granted or secured by the clause, but no right at all, — no right whatever, — to make or to grant to others to make and use the thing patented; in other words, no exclusive right to make or vend. And it is, we think, quite obvious, from the connection and phraseology, that assignees and grantees are placed, and were intended to be placed, in this respect, upon the same footing. We should scarcely be justified in giving to this term a more enlarged meaning as to the right to make and sell, as it respects the one class, than is given to the others, as they are always used as correlative in the patent laws, to the extent of the interests held by them. The clause, therefore, in terms, seems to limit studiously the benefit, or reservation, or whatever it may be called, under or from the new grant to the naked right to use the thing patented; not an exclusive right, even for that, which might denote monopoly, nor any right at all, much less exclusive, to make and vend. This seems to have been guardedly omitted. We do not forget the remaining part of the sentence, "to the extent of their respective interests therein," which is relied on to help out the difficulty. But we see nothing in the phrase, giving full effect to it, necessarily inconsistent with the plain meaning of the previous words. The exact idea intended to be expressed may be open to observation; but we think it far from justifying the court in holding, that the grant or reservation of a right to use a thing patented, well known and in general use at the time, means an exclusive right to make and use it; and not only this, hut an exclusive right to grant to others the right to make and use it, meaning an exclusive right to vend it.

The Court is asked to build up a complete monopoly in the hands of assignees and grantees in the thing patented, by judicial construction, founded upon the grant of a simple right to use it to the extent of the interest possessed; for the argument comes to this complexion. A simple right to use is given, and we are asked to read it an exclusive right, and not only to read it an exclusive right to use, but an exclusive right to make and vend the patented article.

Recurring to the patent law, it will be seen that Congress, in granting

monopolies of this description, have deemed it necessary to use very different language. The grant in the patent must be in express terms, for "the full and exclusive right and liberty of making, using, and vending," in order to confer exclusive privileges. The same language is also used in the act when speaking of portions of the monopoly in the hands of assignees and grantees. * (§§ 11, 14.)

We cannot but think, therefore, if Congress had intended to confer a monopoly in the patented article upon the assignees and grantees, by the clause in question, the usual formula in all such grants would have been observed, and that we should be defeating their understanding and intent, as well as doing violence to the language, to sanction or uphold rights and privileges of such magnitude by the mere force of judicial construction. We conclude, therefore, that the clause has no reference to the right or interest of assignees and grantees under the new and extended term, upon the ground, —

1. Because, in that view, giving to the words the widest construction, there is nothing to satisfy the clause, or upon which any substantial effect and operation can be given to it; it becomes virtually a dead letter, and work of legislative superfluity; and

2. Because the clause in question, upon a true and reasonable interpretation, does not operate to vest the assignees and grantees named therein with any exclusive privileges whatever, in the extended term, and therefore cannot be construed as relating to or embracing such interests in the sense of the law.

The extension of the patent under the eighteenth section is a new grant of the exclusive right or monopoly in the subject of the invention for the seven years. All the rights of assignees or grantees, whether in a share of the patent, or to a specified portion of the territory held under it, terminate at the end of the fourteen years, and become reinvested in the patentee by the new grant. From that date he is again possessed of "the full and exclusive right and liberty of making, using and vending to others the invention," whatever it may be. Not only portions of the monopoly held by assignees and grantees, as subjects of trade and commerce, but the patented articles or machines throughout the country, purchased for practical use in the business affairs of life, are embraced within the operation of the extension. This latter class of assignees and grantees are reached by the new grant of the exclusive right to use the thing patented. Purchasers of the machines, and who were in the use of them at the time, are disabled from further use immediately, as that right became vested exclusively in the patentee. Making and vending the invention are prohibited by the corresponding terms of his grant.

Now, if we read the clause in question with reference to this state of things, we think that much of the difficulty attending it will disappear. By the previous part of the section, the patentee would become reinvested with

the exclusive right to make, use, and vend the thing patented; and the clause in question follows, and was so intended as a qualification. To what extent, is the question. The language is, "And the benefit of such renewal shall extend to assignees and grantees of the right to use the thing patented, to the extent of their respective interests therein," naturally, we think, pointing to those who were in the use of the patented article at the time of the renewal, and intended to restore or save to them that right which, without the clause, would have been vested again exclusively in the patentee. The previous part of the section operating in terms to vest him with the exclusive right to use, as well as to make and vend, there is nothing very remarkable in the words, the legislature intending thereby to qualify the right in respect to a certain class only, leaving the right as to all others in the patentee, in speaking of the benefit of the renewal extending to this class. The renewal vested him with the whole right to use, and therefore there is no great impropriety of language, if intended to protect this class, by giving them, in terms, the benefit of the renewal. Against this view it may be said that "the thing patented" means the invention or discovery, as held in McClurg *v.* Kingsland, 1 How. 202, and that the right to use "the thing patented" is what, in terms, is provided for in the clause. That is admitted, but the words, as used in the connection here found, with the right simply to use the thing patented, not the exclusive right, which would be a monopoly, necessarily refer to the patented machine, and not to the invention; and, indeed, it is in that sense that the expression is to be understood generally throughout the patent law, when taken in connection with the right to use, in contradistinction to the right to make and sell.

The "thing patented" is the invention; so the machine is the thing patented, and to use the machine is to use the invention, because it is the thing invented, and in respect to which the exclusive right is secured, as is also held in M'Clurg *v.* Kingsland. The patented machine is frequently used as equivalent for the "thing patented," as well as for the invention or discovery, and no doubt, when found in connection with the exclusive right to make and vend, always means the right of property in the invention, the monopoly. But when in connection with the simple right to use, the exclusive right to make and vend being in another, the right to use the thing patented necessarily results in a right to use the machine, and nothing more. Then as to the phrase "to the extent of their respective interests therein," that obviously enough refers to their interests in the thing patented, and in connection with the right simply to use, means their interests in the patented machines, be their interest in one or more at the time of the extension.

This view of the clause, which brings it down in practical effect and operation to the persons in the use of the patented machine or machines at the time of the new grant, is strengthened by the clause immediately following, which is, "that no extension of the patent shall be granted after the expiration of the term for which it was originally issued." What is the object

of this provision? Obviously to guard against the injustice which might otherwise occur to a person who had gone to the expense of procuring the patented article, or changed his business upon the faith of using or dealing with it, after the monopoly had expired, which would be arrested by the operation of the new grant. To avoid this consequence, it is provided, that the extension must take place before the expiration of the patent, if at all. Now, it would be somewhat remarkable, if Congress should have been thus careful of a class of persons who had merely gone to the expense of providing themselves with the patented article for use or as a matter of trade, after the monopoly had ceased, and would be disappointed and exposed to loss if it was again renewed, and at the same time had overlooked the class, who, in addition to this expense and change of business, had bought the right from the patentee, and were in the use and enjoyment of the machine, or whatever it might be, at the time of the renewal. These provisions are in juxtaposition, and we think are but parts of the same policy, looking to the protection of individual citizens from any special wrong and injustice on account of the operation of the new grant. The consequences of any different construction from the one proposed to be given are always to be regarded by courts, when dealing with a statute of doubtful meaning. For between two different interpretations, resting upon judicial expositions of ambiguous and involved phraseology, that which will result in what may be regarded as coming nearest to the intention of the legislature should be preferred.

We must remember, too, that we are not dealing with the decision of the particular case before us, though that is involved in the inquiry; but with a general system of great practical interest to the country; and it is the effect of our decision upon the operation of the system that gives to it its chief importance.

The eighteenth section authorizes the renewal of patents in all cases where the board of commissioners is satisfied of the usefulness of the invention, and of the inadequacy of remuneration to the patentee. Inventions of merit only are the subject of the new grant; such as have had the public confidence, and which it may be presumed have entered largely in one way and another into the business affairs of life.

By the report of the commissioners of patents it appears that five hundred and two patents were issued in the year 1814; for the last fourteen years, the average issue yearly exeeeded this number, and embrace articles to be found in common use in every department of labor and art, on the farm, in the workshop and factory. These articles have been purchased from the patentee, and have gone into common use. But if the construction against which we have been contending should prevail, the moment the patent of either article is renewed, the common use is arrested, by the exclusive grant to the patentee. It is true the owner may re-purchase the right to use, and, doubtless, would be compelled from necessity; but he is

left to the discretion or caprice of the patentee. A construction leading to such consequences, and fraught with such unmixed evil, we must be satisfied, was never contemplated by Congress, and should not be adopted unless compelled by the most express and positive language of the statute." The dissenting opinion of Mr. Justice Woodbury in this case will well reward an attentive perusal.

PART II.

PROCEEDINGS TO OBTAIN, RENEW,

OR

EXTEND A PATENT.

PART II.

PROCEEDINGS TO OBTAIN, RENEW, OR EXTEND A PATENT.

CHAPTER I.

THE SPECIFICATION.

§ 120. HAVING ascertained the kinds of subjects for which letters-patent may be obtained, and the parties entitled to take, renew, or extend them, we have now to state the proceedings requisite to the issuing, renewal, and extension of patents, and the principles which govern their construction. As the first step to be taken, in making application for a patent, is to prepare a written description of the invention or discovery, the requisites of this instrument, called the specification, and the rules for its construction, will first engage our attention.

§ 121. The Act of Congress, of July 4th, 1836, c. 357, § 6, contains the following enactment.

"But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case

of any machine, he shall fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery. He shall, furthermore, accompany the whole with a drawing or drawings, and written references, where the nature of the case admits of drawings, or with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention or discovery is of a composition of matter; which descriptions and drawings, signed by the inventor and attested by two witnesses, shall be filed in the patent office; and he shall, moreover, furnish a model of his invention, in all cases which admit of a representation by model, of a convenient size to exhibit advantageously its several parts." [1]

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[1] The Act of 1793, c. 55, § 3, sets forth the requisites of a specification, as follows: "And be it further enacted, that every inventor, before he can receive a patent, shall swear or affirm, that *he does verily believe, that he is the true inventor or discoverer of the art, machine, or improvement, for which he solicits a patent*; which oath or affirmation may be made before any person authorized to administer oaths, and shall deliver a written description of his invention, and of the manner of using, or process of compounding the same, in such full, clear and exact terms, as to distinguish the same from all other things before known, and to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same. And in the case of any machine, he shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions; and he shall accompany the whole with drawings and written references, where the nature of the case admits of drawings, or with specimens of the ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention is of a composition of matter; which description, signed by himself and attested by two witnesses, shall be filed in the office of the Secretary of State, and certified copies thereof shall be competent evidence, in all courts, where any matter or thing, touching such patent right, shall come in question. And such inventor shall, moreover, deliver a model of his machine, provided, the secretary shall deem such model to be necessary."

§ 122. The specification, under our law, occupies a relation to the patent somewhat different from the rule in England. In England, the specification does not form part of the patent, so as to control its construction; but the rights of the inventor are made to depend on the description of his invention, inserted in the title of the patent, and cannot be helped by the specification, the office of which is to describe the mode of constructing, using, or compounding the invention mentioned in the patent.[1] But in the United States, the specification is drawn up and filed before the patent is granted, and is referred to in the patent itself, a copy being annexed. It is therefore the settled rule in this country that the patent and the specification are to be construed together, in order to ascertain the subject-matter of the invention, and that the specification may control the generality of the terms of the patent, of which it forms a part.[2] In like manner drawings annexed to a specification, in compliance with the statute, are held to form a part of it, and are to be regarded in the construction of the whole instrument.[3] Where the term patent, therefore, is used, in the following discussion of the rules of construction, it will be understood to include the specification and drawings annexed to it.[4]

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[1] Phillips on Patents, p. 223; Godson on Patents, p. 108, 117; Hogg *v.* Emerson, 6 Howard 437, 479.

[2] Whittemore *v.* Cutter, 1 Gallis. 429, 437; Barrett *v.* Hall, 1 Mas. 447, 477; Pitts *v.* Whitman, 2 Story's R. 609, 621. So too the specification may enlarge the recitals of the invention in the letters. Hogg *v.* Emerson *ut supra.*

[3] Earle *v.* Sawyer, 4 Mas. 9. It seems, too, that drawings not *referred to* in the specification, may be used to explain it. Washburn *v.* Gould, 3 Story's R. 122, 133; Brooks *v.* Bicknell, 3 M'Lean's R. 250, 261. But they must be drawings accompanying the specification, otherwise they do not form a part of it.

[4] The 5th section of the Act of 1836 declares that "every patent shall contain a short description or title of the invention or discovery, correctly indicating its nature and design," and "referring to the specification for the particulars thereof, a copy of which shall be annexed to the patent, specifying what the patentee claims as his invention or discovery." The Supreme Court of the United States, in a very recent case, have held that wherever

§ 123. In construing patents, it is the province of the court to determine what it is that is intended to be patented, and whether the patent is valid in point of law. Whether the invention itself be specifically described with reasonable certainty is a question of law upon the construction of the terms of the patent; so that it is for the court to determine whether the invention is so vague and incomprehensible as in point of law not to be patentable, whether it is a claim for an improved machine, for a combination, or a single invention; and in short, to determine what the subject-matter is, upon the whole face of the specification and the accompanying drawings.[1] It is therefore the duty of the jury to take the construction of the patent from the court, absolutely, where there are no terms of art made use of which require to be explained by evidence, and no surrounding circumstances to be ascertained as matter of fact, before a construction can be put upon the instrument. But where terms of art requiring explanation are made use of, or where the surrounding circumstances affect the meaning of the specification, these terms and circumstances are necessarily referred to the jury, who must take the construction from the court, conditionally, and determine it according as they find the facts thus put to them.[2]

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this form, of letters with a specification annexed and referred to, has been adopted, either before or since the Act of 1836, the specification is to be considered as part of the letters, in construing them. Hogg *v.* Emerson, 6 Howard 437, 482.

[1] Davis *v.* Palmer, 2 Brock. 298; Lowell *v.* Lewis, 1 Mas. 189; Carver *v.* Braintree Manf. Co. 2 Story, 434, 437, 441; Washburn *v.* Gould, 3 Story, 122, 130, 137, 138, 140, 141; Davoll *v.* Brown, 1 Woodbury & Minot, 53, 56.

[2] Washburn *v.* Gould, *ut supr.* In Neilson *v.* Harford, Webs. Pat. Cas. 370, in the Exchequer, Parke B. delivering the judgment of the court said, "Then we come to the question itself, which depends on the proper construction to be put on the specification itself. It was contended, that of this construction the jury were to judge. We are clearly of a different opinion. The construction of all written instruments belongs to the court alone, whose duty it is to construe all written instruments, as soon as the true meaning of the words in which they are couched, and the surrounding circumstances, if any,

§ 124. It is, on the other hand, the province of the jury to decide, on the evidence of experts, whether the invention is described in such full, clear, and exact terms, as to enable a skilful person to put it in practice, from the specification itself.[1] As specifications are drawn by persons more conversant with the subject than juries, who are selected indiscriminately from the public, and as they are addressed to competent workmen, familiar with the science or branch of industry to which the subject belongs, the evidence of those persons must be resorted to, who are able to tell the jury that they see enough on the face of the specification to enable them to make the article, or reproduce the subject of the patent, without difficulty.[2]

§ 125. The rule of our law that the specification may control the generality of the terms of the patent must be subject to this qualification. If there is a clear repugnancy between the description of the invention as given in the specification, and the invention stated in the letters-patent, the patent will be void; for if the letters are issued for an invention that is not described in the specification, the statute is not complied with. The rule which allows the letters-patent to be controlled by the specifi-

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have been ascertained by the jury; and it is the duty of the jury to take the construction from the court, either absolutely, if there be no words to be construed as words of art, or phrases used in commerce, and the surrounding circumstances to be ascertained, or conditionally, where those words or circumstances are necessarily referred to them. Unless this were so, there would be no certainty in the law, for a misconstruction by the court is the proper subject, by means of a bill of exceptions, of redress in a court of error, but a misconstruction by the jury cannot be set *right* at all *effectually*. Then, taking the construction of this specification upon ourselves, as we are bound to do, it becomes necessary to examine what the nature of the invention is which the plaintiff has disclosed by this instrument."

[1] Davis *v.* Palmer, 2 Brock. 298; Lowell *v.* Lewis, 1 Mas. 182, 190; Carver *v.* Braintree Manf. Co. 2 Story's R. 432, 437, 441; Washburn *v.* Gould, 3 Story's R. 122, 138; Davoll *v.* Brown, 1 Woodbury & Minot, 53, 57; Walton *v.* Potter, Webs. Pat. Cas. 585, 595.

[2] Walton *v.* Potter, Webs. Pat. Cas. 585, 595.

cation cannot extend to a case where the terms of the former are inconsistent with those of the latter.[1]

§ 126. The general rule for the construction of patents, in this country, is, that they are to be construed liberally, and not to be subjected to a rigid interpretation. The nature and extent of the invention claimed by the patentee is the thing to be ascertained; and this is to be arrived at, through the fair sense of the words which he has employed to describe his invention.[2]

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[1] The case of The King *v.* Wheeler, 4 B. & Ald. 345, presents an instance of the invention stated in the patent remaining wholly undescribed by the specification, which described something else.

[2] Ames *v.* Howard, 1 Sumner, 482, 485; Mr. Justice Story said, "Patents for inventions are not to be treated as mere monopolies odious in the eyes of the law, and therefore not to be favored; nor are they to be construed with the utmost rigor, as *strictissimi juris*. The Constitution of the United States, in giving authority to Congress to grant such patents for a limited period, declares the object to be to promote the progress of science and useful arts, an object as truly national, and meritorious, and well founded in public policy as any which can possibly be within the scope of national protection. Hence, it has always been the course of the American Courts, (and it has latterly become that of the English Courts also,) to construe these patents fairly and liberally, and not to subject them to any over-nice and critical refinements. The object is to ascertain, what, from the fair sense of the words of the specification, is the nature and extent of the invention claimed by the party; and when the nature and extent of that claim are apparent, not to fritter away his rights upon formal or subtle objections of a purely technical character."

In Blanchard *v.* Sprague, 3 Sumner, 535, 539, the same learned Judge said, "Formerly, in England, courts of law were disposed to indulge in a very close and strict construction of the specifications, accompanying patents, and expressing the nature and extent of the invention. This construction seems to have been adopted upon the notion, that patent rights were in the nature of monopolies, and, therefore, were to be narrowly watched, and construed with a rigid adherence to their terms, as being in derogation of the general rights of the community. At present a far more liberal and expanded view of the subject is taken. Patents for inventions are now treated as a just reward for ingenious men, and as highly beneficial to the public, not only by holding out suitable encouragements to genius and talents and enterprise; but as ultimately securing to the whole community great advantages

§ 127. But, at the same time, it is to be observed, that the statute prescribes certain requisites for this description of an invention, which are of long standing; and the decisions of the courts, explaining and enforcing these requisites, have established certain rules of construction, intended to guard the public against defective or insufficient descriptions, on the one hand, and to guard inventors, on the other hand, against the acuteness and ingenuity and captious objections of rivals and pirates. The foundation of all these rules of construction is to be found in the object of the specification, which may be thus stated, in the language of the Supreme Court of the United States.

§ 128. The specification has two objects: one is to make known the manner of constructing the machine (if the invention is of a machine) so as to enable artisans to make and use it, and thus to give the public the full benefit of the discovery after the expiration of the patent. The other object of the specification is, to put the public in possession of what the party claims as his own invention, so as to ascertain if he claim anything that is in common use, or is already known, and to guard against prejudice or injury from the use of an invention which the

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from the free communication of secrets, and processes, and machinery, which may be most important to all the great interests of society, to agriculture, to commerce, and to manufactures, as well as to the cause of science and art. In America this liberal view of the subject has always been taken; and indeed it is a natural, if not a necessary result, from the very language and intent of the power given to Congress by the Constitution, on this subject. Congress (says the Constitution) shall have power to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right of their respective writings and discoveries." Patents then are clearly entitled to a liberal construction, since they are not granted as restrictions upon the rights of the community, but are granted "to promote science and useful arts."

See also Ryan *v.* Goodwin, 3 Sumner, 514, where it is said that if the court can perceive, on the whole instrument, the exact nature and extent of the claim made by the inventor, it is bound to adopt that interpretation, and to give it full effect. See also Wyeth *v.* Stone, 1 Story's R. 270, 286; Davoll *v.* Brown, 1 Woodbury & Minot, 53, 57.

party may otherwise innocently suppose not to be patented. It is, therefore, for the purpose of warning an innocent purchaser or other person using a machine, of his infringement of the patent; and at the same time of taking from the inventor the means of practising upon the credulity or the fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification.[1]

§ 129. It has been justly remarked, by a learned writer, that the statute requisites for a good specification run so much into each other, in their nature and character, and are so blended together, that it is difficult to treat of them separately.[2] But the leading purposes of the whole of the statute directions are two; *first*, to inform the public what the thing is of which the patentee claims to be the inventor, and therefore the exclusive proprietor during the existence of his patent; *second*, to enable the public, from the specification itself, to practise the invention thus described, after the expiration of the patent. The principles of construction, and the authorities from which they are drawn may therefore be discussed with reference to these two objects.

§ 130. I. The first rule for preparing a specification is,

To describe the subject-matter, or what the patentee claims to have invented, so as to enable the public to know what his claim is.

Whether the patentee has done this, in a given case, is, as we have seen, generally a question of law for the court, on the construction of the patent. It is not necessary that the language employed should be technical, or scientifically accurate, although at the same time it must not mislead. If the terms

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[1] Evans v. Eaton, 7 Wheaton, 356, 433.

[2] Phillips on Patents, p. 237.

made use of will enable the court to ascertain clearly, by fair interpretation, what the party intends to claim, an inaccuracy or imperfection in the language will not vitiate the specification.[1] But it must appear with reasonable certainty what the party intends to claim; for it is not to be left to minute references and conjectures, as to what was previously known or unknown; since the question is not, what was before known, but what the patentee claims as new.[2] If the patentee has left it wholly ambiguous and uncertain, so loosely defined, and so inaccurately expressed, that the court cannot, upon fair interpretation of the words, and without resorting to mere vague conjecture of intention, gather what the invention is, then the patent is void for this defect. But if the court can clearly see, what is the nature and extent of the claim, by a reasonable use of the means of interpretation of the language used, then, it is said, the patentee is entitled to the benefit of it, however imperfectly and inartificially he may have expressed himself. For this purpose, phrases standing alone are not to be singled out, but the whole is to be taken in connexion.[3]

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[1] Wyeth *v.* Stone, 1 Story's R. 271, 286; Carver *v.* The Braintree Manf. Co. 2 Story's R. 408, 446; Neilson *v.* Harford, Webs. Pat. Cas. 331, 369; Bloxam *v.* Elsee, 1 Car. & P. 558.

[2] Lowell *v.* Lewis, 1 Mas. 182, 188. A general statement that the patented machine is, in all material respects (without stating what respects,) an improvement on an old machine, is no specification at all. *Ib.* See also Kneass *v.* The Schuylkill Bank, 4 Wash. 9. If the patent be for an improved machine, or for an improvement of a machine (the meaning of the terms is the same) it must state in what the improvement specifically consists, and it must be limited to such improvement. If, therefore, the terms be so obscure or doubtful, that the court cannot say which is the particular improvement which the patentee claims, and to what it is limited, the patent is void for ambiguity; and if it covers more than the improvement, it is void, because it is broader than the invention. Barrett *v.* Hall, 1 Mas. 447.

[3] Ames *v.* Howard, 1 Sumner, 482, 485. The drawings are to be taken in connection with the words, and if by a comparison of the words and the drawings, the one would explain the other sufficiently to enable a skilful mechanic to perform the work, the specification is sufficient. Bloxam *v.* Elsee, 1 Car. & P. 558.

§ 131. The statute requires the patentee to give "a written description of his invention or discovery." This involves the necessity, in all cases where the patentee makes use of what is old, of distinguishing between what is old and what is new. He is required to point out in what his invention or discovery consists; and if he includes in his description what has been invented before, without showing that he does not claim to have invented that, his patent will be broader than his invention, and therefore void.[1] Whatever appears to be covered by the claim of the

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[1] Dixon *v.* Moyer, 4 Wash. 68, 73. In this case, Mr. Justice Washington said, "It was insisted by the plaintiff's counsel, that this specification is perfectly intelligible to an artist, who could experience no difficulty in making such a saddle as is there described; and that if it be not so, still the defendant cannot avail himself of the defect, unless he had stated it in his notice, and also proved at the trial an intention in the plaintiff to deceive the public. But these observations are all wide of the objection, which is not that the specification does not contain the whole truth relative to the discovery, or that it contains more than is necessary. It is admitted that the specification does not offend in either of these particulars. But the objection is, that throughout the whole of a very intelligible description of the mode of making the saddle, the patentee has not distinguished what was new, from what was old and before in use, nor pointed out in what particulars his improvement consisted." See also Carpenter *v.* Smith, Webs. Pat. Cas. 530, 532, where Lord Abinger, C. B., said, "It is required as a condition of every patent, that the patentee shall set forth in his specification a true account and description of his patent or invention, and it is necessary in that specification that he should state what his invention is, what he claims to be new, and what he admits to be old; for if the specification states simply the whole machinery which he uses, and which he wishes to introduce into use, and claims the whole of that as new, and does not state that he claims either any particular part, or the combination of the whole as new, why then his patent must be taken to be a patent for the whole, and for each particular part, and his patent will be void if any particular part turns out to be old, or the combination itself not new." See also Davis *v.* Palmer, 2 Brock. 298; Wyeth *v.* Stone, 1 Story's R. 73; Lowell *v.* Lewis, 1 Mas. 188, where Mr. Justice Story said, "The patentee is clearly not entitled to include in his patent the exclusive use of any machinery already known; and if he does, his patent will be broader than his invention, and consequently void. If, therefore, the description in the patent mixes up the old and the new, and does not distinctly ascertain for which, in particular, the patent is

patentee, as his own invention, must be taken as part of the claim, for courts of law are not at liberty to reject any part of the claim ; and therefore if it turns out that anything claimed is not new, the patent is void, however small or unimportant such asserted invention may be.[1]

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claimed, it must be void ; since if it covers the whole, it covers too much, and if not intended to cover the whole, it is impossible for the court to say what, in particular, is covered as the new invention."

[1] Moody *v.* Fisk, 2 Mas. 112, 118. In this case, Mr. Justice Story said, "Where the patentee claims anything as his own invention, in his specification, courts of law cannot reject the claim ; and if included in the patent, and found not to be new, the patent is void."

In the case of Campion *v.* Benyon, 3 Brod. & B. 5, the patent was taken out for "an improved method of making sail cloth, without any starch whatever." The real improvement consisted in a new mode of texture, and not in the exclusion of starch, the advantage of excluding that substance having been discovered and made public before. *Park, J., said,* "*In the patentee's* process he tells us that the necessity of using starch is superseded, and mildew thereby entirely prevented ; but if he meant to claim as his own an improved method of texture or twisting the thread to be applied to the making of unstarched cloth, he might have guarded himself against ambiguity, *by disclaiming* as his own discovery the advantage of excluding starch." In this case, the specification itself furnished no means by which the generality of its expressions could be restrained. But there is a case where the literal meaning of terms which would have covered too much ground, was limited by other phrases used in the context. The specification stated the invention to be an improved apparatus for "extracting inflammable gas by heat, from pit-coal, tar, or *any other substance* from which gas or gases, capable of being employed, for illumination, can be extracted by heat." Lord Tenterden held that the words "any other substance" must mean other substances *ejusdem generis ;* and therefore that it was not a fatal defect that the apparatus would not extract gas from oil ; and that oil was not meant to be included, it being at that time considered too expensive for the making of gas for purposes of illumination, though it was known to be capable of being so used. Crossley *v.* Beverly, 3 Car. & P. 513 ; Webs. Pat. Cas. 106. Upon this distinction, Mr. Webster remarks that "the true principle would appear to be the intention of the party at the time, first, as expressed distinctly on the face of the specification ; and secondly, as may be inferred therefrom, according to the state of knowledge at the time, and other circumstances." Webs. Pat. Cases, 110, note. — Where the patentee in his specification claimed "an improvement in the construction of the axles or bearings of railway or *other wheeled carriages*," and it appeared that the improvement,

§ 132. But there is a very important rule to be attended to, in this connection, which has been laid down by the Court of Common Pleas in England: viz., that a specification should be so construed, as, consistently with the fair import of language, will make the claim co-extensive with the actual discovery. So that, a patentee, unless his language necessarily imports a claim of things in use, will be presumed not to intend to claim things which he must know to be in use.[1]

§ 133. The object of the distinction between what is new and

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though it had never before been applied to railway carriages, was well known as applied to other carriages, it was held that the patent was not good. Winans *v.* Providence R. Road Company, 2 Story's R. 412.

[1] Haworth *v.* Hardcastle, Webs. Pat. Cas. 480, 484. In this case, Sir N. C. Tindall, C. J. said, "As to the second ground upon which the motion for a nonsuit proceeded, we think, upon the fair construction of the specification itself, the patentee does not claim as part of his invention, either the rails or staves over which the calicoes and other cloths are to be hung, or the placing them at the upper part of the building. The use of rails and staves for this purpose was proved to have been so general before the granting of this patent, that it would be almost impossible *à priori* to suppose that the patentee intended to claim what he could not but know would have avoided his patent, and the express statement that he makes, 'that he constructs the stove or drying house in a manner nearly similar to those which are at present in use, and that he arranges the rails or staves on which the cloth or fabric is intended to be hung or suspended, near to the upper part of the said stove or drying house,' shows clearly that he is speaking of those rails or staves as of things then known and in common use, for he begins with describing the drying house as nearly similar to those in common use; he gives no dimensions of the rails or staves, no exact position of them, nor any particular description by reference, as he invariably does when he comes to that part of the machinery which is peculiarly his own invention. There can be no rule of law which requires the court to make any forced construction of the specification, so as to extend the claim of the patentee *a wider range than the facts would warrant; on the contrary, such construction ought to be* made as will, consistently with the fair import of the language used, make the claim of invention coëxtensive with *the new discovery* of the grantee of the patent. And we see no reason to believe that he intended under this specification to claim either the staves, or the position of the staves as to their height in the drying house, as a part of his own invention."

what is old is to show distinctly what the patentee claims as his invention. But it has been said, that the mere discrimination between what is old and what is new will not, in all cases, show this, for perhaps the patentee does not claim all that is new.[1] But the meaning of the authorities, as well as the purpose of the statute, shows that the object of the specification is, to state distinctly what the patentee claims as the subject-matter of his invention or discovery; and the discrimination commonly made between what is new and what is old, is one of the means necessary to present clearly the subject-matter of the invention or discovery.[2] In order to make this discrimination, the patentee is not confined to any precise form of words.[3] The more usual form is to state affirmatively what the patentee claims as new, and if he makes use of anything old, to state negatively that he does not claim that thing.[4] It is not enough that the thing

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[1] Phillips on Patents, 270.

[2] See Barrett *v.* Hall, 1 Mas. 475; Woodcock *v.* Parker, 1 Gallis. 438; Whittemore *v.* Cutter, Ib. 478; Odiorne *v.* Winkley, 2 Gallis. 51; Evans *v.* Eaton, 3 Wheat. 534; 7 Ib. 356; Wyeth *v.* Stone, 1 Story's R. 273; Ames *v.* Howard, 1 Sumner, 482.

[3] Wyeth *v.* Stone, 1 Story's R. 73.

[4] If a specification truly sums up and distinguishes the invention of the patentee, it will not be open to the objection of being too broad, although it describes with unnecessary minuteness, a process well known to those conversant with the art. Kneass *v.* The Schuylkill Bank, 4 Wash. 9, 14. See also Ames *v.* Howard, 1 Sumner, 482, 485. Mr. Godson gives the following directions for drawing specifications: "That the new parts of the subject may be more clearly seen and easily known, the patentee must not only claim neither more nor less than his own invention, but he must *not appear* even unintentionally to appropriate to himself any part which is old, or has been used in other manufactures. (Huddart *v.* Grimshaw, Dav. Pat. Cas. 295.) Those parts that are old and immaterial, or are not of the essence of the invention, should either not be mentioned, or should be named only to be designated as old. The patentee is not required to say that a screw or bobbin, or anything in common use, is not part of his discovery; yet he must not adopt the invention of another person, however insignificant it may appear to be, without a remark. If any parts are described as essential without a protest against any novelty being attached to them, it will seem, though they are old, that they are claimed as new. Bovill *v.* Moore, Dav.

designed to be embraced by the patent, should be made apparent on the trial, by a comparison of the new with the old machine. The specification must distinguish the new from the old, so as to point out in what the improvement consists.[1]

§ 134. In describing what is old, it is not always necessary to enter into detail. Things generally known, or in common use, may be referred to in general terms, provided they create no ambiguity or uncertainty, and provided such reference is accompanied by an intelligible description of what is new.[2] In describing an improvement of a machine, or what is the same thing, an improved machine, great care must be taken not to describe the whole in such a way as to make it appear to be claimed as the invention of the patentee. The former machine, or other thing, should be set forth in the patent sufficiently to make known, according to the nature of the case, what it is that the patentee engrafts his improvement upon; he should then disclaim the invention of the thing thus referred to or described, and state distinctly his improvement as the thing which he claims to have invented.[3] One of the most common defects in a specification,

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Pat. Cas. 404; Manton *v.* Parker, Dav. Pat. Cas. 329.) The construction will be against the patentee that he seeks to monopolize more than he has invented, or that, by dwelling in his description on things that are immaterial or known, he endeavors to deceive the public, who are not to be deterred from using anything that is old by its appearing in the specification as newly invented. They are to be warned against infringing on the rights of the patentee, but are not to be deprived of a manufacture which they before possessed. (Dav. Pat. Cas. 279, and 3 Meriv. 629.) It seems, therefore, to be the safest way in the specification to describe the whole subject, and then to point out all the parts which are old and well known." Godson on Patents, 128.

[1] Dixon *v.* Moyer, 4 Wash. R. 68.

[2] Davis *v.* Palmer, 2 Brock. 298.

[3] In Hill *v.* Thompson, 8 Taunt. 375, Lord Ch. J. Dallas said, "This, like every other patent, must undoubtedly stand on the ground of improvement or discovery. If of improvement, it must stand on the ground of improvement invented; if of discovery, it must stand on the ground of the discovery of something altogether new; and the patent must distinguish and adapt itself accordingly." See also Bovill *v.* Moore, Dav. Pat. Cas. 398.

consists in that sort of vagueness and ambiguity in the manner of describing the invention, which makes it difficult or impossible to determine what the invention is. This is an objection distinct from an ambiguity in the terms made use of. Thus, where the directions contained in a specification were "to take any quantity of lead and calcine it, or minium, or red lead," the objection was that it was uncertain whether the minium and red lead were to be calcined, or only the lead.[1] So too, if it be stated that a whole class of substances may be used to produce a given effect, when, in fact, only one is capable of being so used successfully, an ambiguity is at once produced, and the public are misled;[2] but if the patentee states the substances which he makes use of himself, and there are still other substances which will produce the effect, and he claims them by a generic description, as comprehended within his invention, his claim will not be void for ambiguity, or too broad for his invention, provided the combination is new in respect to all the substances thus referred to.[3]

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[1] Turner *v.* Winter, Webs. Pat. Cas. 80. Another objection taken, was, as to the white lead, which the patent professed to make by the same process by which it made something else; to which it was answered, that the invention did not profess to make common white lead. Ashurst, J., said, "But that is no answer; for if the patentee had intended to produce something only like white lead, or answering some of the purposes of common white lead, it should have been so expressed in the specification. But in truth, the patent is for making white lead and two other things by one process. Therefore, if the process, as directed by the specification, does not produce that which the patent professes to do, the patent itself is void."

[2] Bickford *v.* Skewes, Webs. Pat. Cas. 218. If more parts be inserted than are necessary, as ten, where four are sufficient, the specification is void. The King *v.* Arkwright, Webs. Pat. Cases, 70.

[3] Ryan *v.* Goodwin, 3 Sumner, 514, 519. In this case, Mr. Justice Story said, "Then as to the third point. This turns upon the supposed vagueness, and ambiguity, and uncertainty of the specification and claim of the invention thereby. The specification, after adverting to the fact, that the *loco-foco* matches, so called, are a compound of phosphorus, chlorate of potash, sulphuret of antimony, and gum arabic or glue, proceeds to state that the compound which he, (Phillips) uses, 'consists simply of phosphorus, chalk,

§ 135. In like manner, where a particular effect or purpose in machinery is a part of the invention, and that effect may be pro-

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and glue;' and he then states the mode of preparing the compound, and the proportions of the ingredients; so that as here stated, the essential difference between his own matches and those called *loco-foco*, consists in the omission of chlorate of potash and sulphuret of antimony, and using in lieu thereof chalk. He then goes on to state, that 'the proportions of the ingredients may be varied, and that gum arabic, or other gum, may be substituted for glue; and other absorbent earths or materials may be used instead of carbonate of lime.' He afterwards sums up his invention in the following terms: 'What I claim as my invention is the using of a paste or composition to ignite by friction, consisting of phosphorus, and [an] earthy material, and a glutinous substance only, without the addition of chlorate of potash, or of any other highly combustible material, such as sulphuret of antimony, in addition to the phosphorus. I also claim the mode herein described, of putting up the matches in paper, so as to secure them from accidental friction.' Upon this last claim I need say nothing, as it is not in controversy, as a part of the infringement of the patent, upon the present trial. Now, I take it to be the clear rule of our law in favor of inventors, and to carry into effect the obvious object of the constitution and laws in granting patents, 'to promote the progress of science and useful arts,' to give a liberal construction to the language of all patents, and specifications (*ut res magis valeat, quam pereat*) so as to protect; and not to destroy the rights of real inventors. If, therefore, there be any ambiguity or uncertainty in any part of the specification; yet, if taking the whole together, the court can perceive the exact nature and extent of the claim made by the inventor, it is bound to adopt that interpretation, and to give it full effect. I confess, that I do not perceive any ground for real doubt in the present specification. The inventor claims as his invention the combination of phosphorus with chalk or any other absorbent earth, or earthy material, and glue, or any other glutinous substance in making matches, using the ingredients in the proportions, substantially as set forth in the specification. Now, the question is, whether such a claim is good, or whether it is void, as being too broad and comprehensive. The argument seems to be, that the inventor has not confined his claim to the use of chalk, but has extended it to the use of any other absorbent earths or earthy materials, which is too general. So, he has not confined it to the use of glue, or even of gum arabic, but has extended it also to any other gum or glutinous substance, which is also too general. Now, it is observable, that the patent act of 1793, c. 55, does not limit the inventor to one single mode, or one single set of ingredients, to carry into effect his invention. He may claim as many modes, as he pleases, provided always, that the claim is limited to such, as he has invented, and as are substantially

duced in several modes, it is sufficient for the patentee to state the modes which he contemplates as best, and his claim will not be void, as too vague or comprehensive, although he claims

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new. Indeed, in one section (§ 3,) the act requires, in the case of a machine, that the inventor shall fully explain the principle, and the several modes, in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions. The same enactment exists in the patent act of 1836, c. 357, § 6. I do not know of any principle of law, which declares, that, if a man makes a new compound, wholly unknown before for a useful and valuable purpose, he is limited to the use of the same precise ingredients in making that compound; and that, if the same purpose can be accomplished by him by the substitution in part of other ingredients in the composition, he is not at liberty to extend his patent so as to embrace them also. It is true, that in such a case he runs the risk of having his patent avoided, if either of the combinations, the original, or the substituted, have been known or used before in the like combination. But, if all the various combinations are equally new, I do not perceive, how his claim can be said to be too broad. It is not more broad than his invention. There is no proof in the present case, that the ingredients enumerated in this specification, whether chalk, or any other absorbent earth, or earthy substance were ever before combined with phosphorus, and glue, or any gum or other glutinous substance, to produce a compound for matches. The objection, so far as it here applies, is not, that these gums or earths have been before so combined with phosphorus, but that the inventor extends his claim, so as to include all such combinations. There is no pretence to say, upon the evidence, that the specification was intended to deceive the public, or that it included other earthy materials than chalk, or other glutinous substances than glue, for the very purpose of misleading the public. The party has stated frankly, what he deems the best materials, phosphorus, chalk, and glue, and the proportions and mode of combining them. But, because he says, that there may be substitutes of the same general character, which may serve the same purpose, thereby to exclude other persons from evading his patent, and depriving him of his invention, by using one or more of the substitutes, if the patent had been confined to the combination solely of phosphorus, chalk, and glue, I cannot hold that his claim is too broad, or that it is void. My present impression is, that the objection is not well founded. Suppose the invention had been of a machine, and the inventor had said, I use a wheel in a certain part of the machine for a certain purpose, but the same effect may be produced by a crank, or a lever, or a toggle joint, and therefore I claim these modes also; it would hardly be contended, that such a claim would avoid his patent. I do not know, that it has ever been

the variations from those modes as being equally his invention, without describing the manner of producing those variations.[1]

§ 136. This kind of ambiguity is also distinguishable from the

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decided, that, if the claim of an inventor for an invention of a compound states the ingredients truly, which the inventor uses to produce the intended effect, the suggestion, that other ingredients of a kindred nature may be substituted for some part of them, has been held to avoid the patent *in toto*, so as to make it bad, for what is specifically stated. In the present case it is not necessary to consider that point. My opinion is, that the specification is not, in point of law, void, from its vagueness, or generality, or uncertainty."

[1] Carver *v.* Braintree Manf. Co. 2 Story's R. 432, 440. "Another objection is, that the plaintiff, in his claim, has stated, that the desired distance or space between the upper and the lower surfaces of the rib, whether it 'be done by making the ribs thicker at that part, or by a fork or division of the rib, or by any other variation of the particular form,' is a part of his invention. It is said, that the modes of forking and dividing are not specified, nor the variations of the particular form given. This is true; but then the patent act requires the patentee to specify the several modes, 'in which he has contemplated the application of the distinguishing principle or character of his invention.' (Act of 1836, ch. 357, § 6.) Now, we all know that a mere difference of form will not entitle a party to a patent. What the patentee here says in effect is: One important part of my invention consists in the space or distance between the upper and lower surfaces of the ribs, and whether this is obtained by making the rib solid, or by a fork, or division of the rib, or by any other variation of the form of the rib, I equally claim it as my invention. The end to be obtained is the space or distance equal to the fibre of the cotton to be ginned; and you may make the rib solid, or fork it, or divide it, or vary its form in any other manner, so as that the purpose is obtained. The patentee, therefore, guards himself against the suggestion, that his invention consists solely in a particular form, solid, or forked, or divided; and claims the invention to be his, whether the exact form is preserved, or not, if its proportions are kept so as to be adapted to the fibre of the cotton which is to be ginned. In all this I can perceive no want of accuracy or sufficiency of description, at least so far as it is a matter of law, nor any claim, broader than the invention, which is either so vague or so comprehensive, as, in point of law, not to be patentable. It was not incumbent upon the patentee to suggest all the possible modes by which the rib might be varied, and yet the effect produced. It is sufficient for him to state the modes which he contemplates to be best, and to add, that other mere formal variations from these modes he does not deem to be unprotected by his patent."

want of clear or specific directions, which will enable a mechanic to make the thing described. A specification may be perfectly sufficient, as to the point of stating what the invention is, and yet the directions for making the thing may be so vague and indefinite, as not to enable a skilful mechanic to accomplish the object.[1] It is for this reason, as we have seen, that the question, whether the specification discloses what the invention is, is a question for the court on construction of the patent; while the question, whether it sufficiently describes the mode of carrying the invention into practice, is a question for the jury.[2]

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[1] It may not, perhaps, be easy to draw a precise line of distinction between a specification so uncertain, as to claim no particular improvement, and a specification so uncertain as not to enable a skilful workman to understand the improvement, and to construct it. Yet, we think the distinction exists. If it does, it is within the province of the jury to decide, whether a skilful workman can carry into execution the plan of the inventor. In deciding this question, the jury will give a liberal common sense construction to the directions of the specification." Per Marshall, C. J., in Davis *v.* Palmer, 2 Brock. 298, 308.

[2] Thus, in the case of a patent for "a new and useful improvement in the ribs of the cotton gin," Mr. Justice Story said "It is true, that the plaintiff in his specification, in describing the thickness of the rib in his machine, declares, that it should be so thick, that the distance or depth between the upper and the lower surface should be 'so great as to be equal to the length of the fibre to be ginned,' which, it is said, is too ambiguous and indefinite a description to enable a mechanic to make it, because it is notorious, that not only the fibres of different kinds of cotton are of different lengths, long staple and short staple; but that the different fibres in the same kind of cotton are of unequal lengths. And it is asked, what then is to be the distance or depth or thickness of the rib? Whether a skilful mechanic could from this description make a proper rib for any particular kind of cotton, is a matter of fact, which those only, who are acquainted with the structure of cotton gins, can properly answer. If they could, then the description is sufficient, although it may require some niceties in adjusting the different thicknesses to the different kinds of cotton. If they could not, then the specification is obviously defective. But I should suppose, that the inequalities of the different fibres of the same kind of cotton would not necessarily present an insurmountable difficulty. It may be, that the adjustment should be to be made according to the average length of the fibres, or varied in some other way. But this is for a practical mechanic to say, and not for the Court.

§ 137. The ambiguity produced by a too great fulness of detail in the specification is likely to mislead both in determining what the invention claimed is, and in determining whether it is described with such accuracy as will enable a competent workman to put it in practice. We shall have occasion hereafter to state the rule, that the patentee is bound to disclose the most advantageous mode known to him; and any circumstance conducive to the advantageous operation of his invention; and it is a correlative of this rule, that if things wholly useless and unnecessary are introduced into the specification, as if they were essential, although the terms are perfectly intelligible, and every necessary description has been introduced, and the parts claimed are all newly invented, the patent may be declared void. The presumption, in such cases, according to the English authorities, is, that the useless and unnecessary descriptions were introduced for the purpose of overloading the subject and clouding the description, in order to mislead the public and conceal the real invention.[1]

What I mean, therefore, to say on this point is, that, as a matter of law, I cannot say, that this description is so ambiguous, that the patent is upon its face void. It may be less perfect and complete than would be desirable, but still it may be sufficient to enable a skilful mechanic to attain the end. In point of fact, is it not actually attained by the mechanics employed by Carver, without the application of any new inventive power, or experiments? If so, then the objection could be answered as a matter of fact or a practical result." Carver *v.* The Braintree Manufacturing Company, 2 Story's R. 432, 437.

[1] In Arkwright's case, several things were introduced into the specification, of which he did not make use. Buller, J., said, "Wood put No. 4, 5, 6, and 7, together, and that machine he has worked ever since; he don't recollect that the defendant used anything else. If that be true, it will blow up the patent at once; he says he believes nobody that ever practised would find anything necessary upon this paper but the No. 4, 5, 6, and 7; he should look after no others. Now if four things only were necessary instead of ten, the specification does not contain a good account of the invention." The King *v.* Arkwright, Webs. Pat. Cas. 70.

In Turner's patent for producing a yellow color, minium was directed to be used among other things, but it appeared that it would not produce the

§ 138. There is one case where it seems to have been held that an improved mode of working his machine by the patentee, different from the specification of his patent, casts upon him the burthen of showing that he made the improvement subsequently to the issuing of his patent, otherwise it will be presumed that he did not disclose in his specification the best method known to him.[1] But where a patentee of an improved machine claimed as his invention a part of it which turned out to be useless, it was held that this did not vitiate the patent, the specification not describing it as essential to the machine.[2] At the same time, it is necessary that the specification should be full and explicit enough to prevent the public from infringing the right of the patentee. An infringement will not have taken place, unless the invention can be practised completely by following the specification; otherwise, it has been said, it would be an infringement to do that perfectly, which, according to the specification, requires something else to be done to make it perfect. An infringement is a copy made after and agreeing with the principle laid down in the patent;[3] and if the patent does not fully describe everything essential to the making or doing of the thing patented, there will be no infringement by the fresh

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desired effect. The same learned judge said, "Now in this case no evidence was offered by the plaintiff to show that he had ever made use of the several different ingredients mentioned in the specification, as for instance minium, which he had nevertheless inserted in the patent; nor did he give any evidence to show *how* the yellow color was produced. If he could make it with two or three of the ingredients specified, and he has inserted others which will not answer the purpose, that will avoid the patent. So if he makes the article, for which the patent is granted, with cheaper materials than those which he has enumerated, although the latter will answer the purpose equally well, the patent is void, because he does not put the public in possession of his invention, or enable them to derive the same benefit which he himself does." Turner *v.* Winter, 1 T. R. 602, 607. See also Savory *v.* Price, R. & M. 1.

[1] Bovill *v.* Moore, Dav. Pat. Cas. 361, 401.

[2] Lewis *v.* Marling, 10 B. & Cress. 22.

[3] Per Sir N. Tindal, C. J., in Galloway *v.* Bleaden, Webs. Pat. Cas. 523.

invention of processes which the patentee has withheld from the public.[1]

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[1] This doctrine was very clearly laid down by Alderson, B., in Morgan *v.* Seaward, Webs. Pat. Cas. 167, 181. "Then Henry Mornay, a young gentleman in Mr. Morgan's employment, where he has been apparently studying the construction of engines, speaks of a circumstance which does appear to me to be material. He says, Mr. Morgan in practice makes his rods of different lengths. He must necessarily do so, in order that the floats may follow at the same angle as that at which the driving float enters the water. The problem which Mr. Park solved is a problem applying to three floats only: but it appears that the other floats will not follow in the same order, unless some adjustment of the rods is made. Now, suppose it was to be desired that the floats should all enter the water at the given or required angle, if one should go in at one angle, and one at another, the operation of the machine would not be uniform; and the specification means that the party constructing a wheel, should be able to make a wheel, the floats of which shall all enter at the same angle, and all go out at the same angle. Now in order in practice to carry that into effect, if there are more than three floats, something more than Mr. Park's problem would be required; and Mr. Mornay says actually, that Mr. Morgan in practice makes his rods of different lengths, and he must necessarily do that in order that the floats may follow at the same angle as the driving float enters the water. If so, he should have said in his specification, 'I make my rods of different lengths, in order that the rest of my floats may enter at the same angle; and the way to do that is so and so.' Or he might have said, 'it may be determined so and so.' But the specification is totally silent on the subject; therefore, a person reading the specification would never dream that the other floats must be governed by rods of unequal length; and least of all could he ascertain what their lengths should be, until he had made experiments. Therefore it is contended that the specification does not state as it should have stated, the proper manner of doing it. He says, if they are made of equal lengths, though the governing rod would be vertical at the time of entering, and three would be so when they arrived at the same spot, by reason of the operation Mr. Park suggests, yet the fourth would not come vertical at the proper point, nor would the fifth, sixth, or seventh. Then they would not accomplish that advantage which professes to be acquired. The patentee ought to state in his specification the precise way of doing it. If it cannot completely be done by following the specification, then a person will not infringe the patent by doing it. If this were an infringement, it would be an infringement to do that perfectly, which, according to the specification, requires something else to be done to make it perfect. If that be correct, you would prevent a man

§ 139. The ambiguity produced by a misuse of terms, so as to render the specification unintelligible, will be as fatal as any other defect. Thus, where the directions were to use "sea-salt, or sal-gem, or fossil-salt, or any marine-salt," and it appeared that "sal-gem" was the only thing that could be used, and that "fossil-salt" was a generic term, including "sal-gem," as well as other species of salt, it was held that the use of the term "fossil-salt" could only tend to mislead and to create unnecessary experiments, and therefore that the specification was in that respect defective.[1] In like manner where the specification directed the use of "the finest and purest chemical white-lead," and it appeared that no such substance was known in the trade by that name, but that white-lead only was known, the specification was held defective.[2] But a mere mistake of one word for another in writing or printing, if explained by other parts of the patent and specification, as the use of the word "painting" for "printing," is immaterial.[3]

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from having a perfect engine. He says, practically speaking, the difference in the length of the rods would not be very material, the difference being small. But the whole question is small, therefore it ought to have been specified; and if it could not be ascertained fully, it should have been so stated. Now this is the part to which I was referring, when in the preliminary observations I addressed to you, I cited the case before Lord Mansfield, on the subject of the introduction of tallow to enable the machine to work more smoothly. There it was held that the use of tallow ought to have been stated in the specification. This small adjustment of these different lengths may have been made for the purpose of making the machine work more smoothly; if so, it is just as much necessary that it should be so stated in the specification, as it was that the tallow should be mentioned. The true criterion is this, has the specification substantially complied with that which the public has a right to require? Has the patentee communicated to the public the manner of carrying his invention into effect? If he has, and if he has given to the public all the knowledge he had himself, he has done that which he ought to have done, and which the public has a right to require from him."

[1] Turner *v.* Winter, 1 T. R. 606.

[2] Sturz *v.* De La Rue, Webs. Pat. Cas. 83.

[3] Kneass *v.* The Schuylkill Bank, 4 Wash. 9.

§ 140. The description of an improvement, when an improvement is the real subject-matter of the patent, should be made in such a manner as will clearly show that the improvement only is claimed by the patentee. If a machine substantially existed before, and the patentee makes an improvement therein, his patent should not comprehend the whole machine in its improved state, but should be confined to his improvement;[1] and this is true, although the invention of the patentee consists of an addition to the old machine, by which the same effects are to be produced in a better manner, or some new combinations are added, in order to produce new effects.[2] But if well-known effects are produced by machinery which in all its combinations is entirely new, the subject-matter will be a new machine, and of course the patent will cover the whole machine.[3]

§ 141. If the invention be an improvement, and be claimed as such, but nothing is said of any previous use, of which the use proposed is averred to be an improvement, the patent may incur the risk of being construed as a claim of entire and original discovery. Hence arises the necessity for reciting what had formerly been done, and describing a different mode as the improvement claimed.[4]

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[1] Woodcock *v.* Parker, 1 Gallis. 438; Odiorne *v.* Winkley, 2 Gallis. 51; Barrett *v.* Hall, 1 Mas. 447, 476.

[2] Whittemore *v.* Cutter, 1 Gallis. 478.

[3] Ibid.

[4] In Hill *v.* Thompson, Webs. Pat. Cas. 226, 228, 229, the specification contained among other things the following claim: "And that my said improvements do further consist in the use and application of lime to iron, subsequently to the operations of the blast-furnace, whereby that quality in iron from which the iron is called "cold short," howsoever and from whatever substance such iron be obtained, is sufficiently prevented or remedied, and by which such iron is rendered more tough when cold." "And I do further declare, that I have discovered that the addition of lime or limestone, or other substances consisting chiefly of lime, and free or nearly free from any ingredient known to be hurtful to the quality of iron, will sufficiently prevent or remedy that quality in iron from which the iron is called "cold short," and

§ 142. But in describing the improvement of a machine in use and well known, it is not necessary to state in detail the structure of the entire and improved machine. It is only neces-

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will render such iron more tough when cold; and I do, for this purpose, if the iron, howsoever and from whatever substance the same may have been obtained, be expected to prove "cold short," add a portion of lime or limestone, or of the other said substances, of which the quantity must be regulated by the quality of the iron to be operated upon, and by the quality of the iron wished to be produced; and further, that the said lime or limestone, or other aforesaid substances, may be added to the iron at any time subsequently to the reduction thereof, in the blast furnace, and prior to the iron becoming clotted, or coming into nature, whether the same be added to the iron while it is in the refining or in the puddling furnace, or in both of them, or previous to the said iron being put into either of the said furnaces." It appeared that "cold short" had been prevented by the use of lime before; and Dallas, J. said, "The purpose is to render bar iron more tough, by preventing that brittleness which is called "cold short," and which renders bar iron less valuable; the means of prevention stated, are the application of lime. In what way, then, is lime mentioned in the patent? The first part of the specification, in terms, alleges certain improvements in the smelting and working of iron, during the operations of the blast furnace; and then, introducing the mention of lime, it states, that the application of it to *iron, subsequently to the operation of the blast furnace, will prevent* the quality called "cold short."

So far, therefore, the application of lime is, in terms claimed as an improvement, and nothing is said of any previous use, of which the use proposed is averred to be an improvement; it is, therefore, in substance, a claim of entire and original discovery. The recital should have stated, supposing a previous use to be proved in the case, that, "whereas lime has been in part, but improperly, made use of, &c. and then a different mode of application and use should have been suggested as the improvement claimed. But the whole of the patent must be taken together, and this objection will appear to be stronger as we proceed. And here again, looking through the patent, in a subsequent part of the specification, the word "discovery" first occurs, and I will state the terms made use of in this respect. "And I do further declare, that I have discovered that the addition of lime will prevent that quality in iron from which the iron is called "cold short," and will render such iron more tough when cold; and that for this purpose, I do add a a portion of lime or limestone, to be regulated by the quantity of iron to be operated upon, and by the quality of the iron to be produced, to be added at any time subsequently to the reduction in the blast furnace, and this from

sary to describe the improvement, by showing the parts of which it consists, and the effects which it produces.[1] In the case of machinery there is a particular requisition in the statute, designed to ensure fulness and clearness in the specification. "And in case of any machine, he (the patentee) shall fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.[2] By the principle of a machine, as used in this clause of the statute, is to be understood the peculiar structure and mode of operation of such machine;[3] or, as the statute itself explains it, the character by which it may be distinguished from other inventions. By explaining "the several modes in which he has contemplated the application of that principle," the statute is presumed to direct the patentee to point out all the modes of applying the principle, which he claims to be his own invention, and which he means to have covered by his patent, whether they are those which he deems the best, or are mere formal variations from the modes which he prefers. In other words, he is to state not only the peculiar device or construction which he deems the best for producing the new effect exhibited in his machine, but also all the other modes of producing the same effect, which he

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whatever substance the iron may be produced, if expected to prove "cold short." Now this appears to be nothing short of a claim of discovery, in the most extensive sense, of the effect of lime applied to iron to prevent brittleness, not qualified and restrained by what follows, as to the preferable mode of applying it under various circumstances, and, therefore, rendering the patent void, if lime had been made use of for this purpose before, subject to the qualification only of applying it subsequently to the operations in the blast furnace."

[1] Brooks *v.* Bicknell, 3 M'Lean's R. 250, 261.

[2] Act of July 4, 1836, § 6.

[3] Whittemore *v.* Cutter, 1 Gallis. 478, 480; Barrett *v* Hall, 1 Mas. 447, 470.

means to claim as being substantially applications of the same principle. But in doing this, it is not, as we have seen, necessary for him to enter into a minute description of the mode of producing those variations of structure which he thus claims, in addition to the structure which he prefers. It is sufficient, if he indicates what variations of the application of the principle he claims beyond those which he deems the best.[1]

§ 143. The duty of determining what the claim of the patentee is involves the necessity of determining whether the description in the specification discloses a patentable subject. The real invention may be a patentable subject; but at the same time it may be claimed in such a way as to appear to be a mere function, or abstract principle, which it will be the duty of the Court to declare is not patentable; whereas, if it had been described differently, it would have been seen to be a claim for a principle or function embodied in a particular organization of matter for a particular purpose, which is patentable. The patentee may have been engaged in investigations into the principles of science or the laws of nature. He may have attained a result, which constitutes a most important and valuable discovery, and he may desire to protect that discovery by a patent; but he cannot do so by merely stating his discovery in a specification. He must give it a practical application to some useful purpose, to attain a result in arts or manufactures not before attained, and his specification must show the application of the principle to such a special purpose, by its incorporation with matter in such a way as to be in a condition to produce a practical result.[2] Care should be taken, therefore, in drawing spe-

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[1] See the observations of Mr. Justice Story, cited *ante*, from the case of Carver *v.* The Braintree Manuf. Company, 2 Story's R. 432, 440.

[2] In the Household Company *v.* Neilson, Webs. Pat. Cas. 673, 683, Lord Justice Clerk Hope, in the Court of Sessions, made the following clear observations to the jury: "It is quite true that a patent cannot be taken out solely for an abstract philosophical principle — for instance, for any law of

cifications, not to describe the invention as a mode or device for producing an effect, detached from machinery, or from the particular combination or use of matter, by which the effect is produced.[1] The danger in such cases is, that the claim will appear to be a claim for an abstract principle, or for all possible modes

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nature, or any property of matter, apart from any mode of turning it to account in the practical operations of manufacture, or the business, and arts, and utilities of life. The mere discovery of such a principle is not an invention, in the patent law sense of the term. Stating such a principle in a patent may be a prolongation of the principle, but it is no application of the principle to any practical purpose. And without that application of the principle to a practical object and end, and without the application of it to human industry, or to the purposes of human enjoyment, a person cannot in the abstract appropriate a principle to himself. But a patent will be good, though the subject of the patent consists in the discovery of a great, general, and most comprehensive principle in science or law of nature, if that principle is by the specification applied to any special purpose, so as thereby to effectuate a practical result and benefit not previously attained.

The main merit, the most important part of the invention, may consist in the conception of the original idea — in the discovery of the principle in science, or of the law of nature, stated in the patent, and little or no pains may have been taken in working out the best manner and mode of the application of the principle to the purpose set forth in the patent. But still, if the principle is stated to be applicable to any special purpose, so as to produce any result previously unknown, in the way and for the objects described, the patent is good. It is no longer an abstract principle. It comes to be a principle turned to account, to a practical object, and applied to a special result. It becomes, then, not an abstract principle, which means a principle considered apart from any special purpose or practical operation, but the discovery and statement of a principle for a special purpose; that is, a practical invention, a mode of carrying a principle into effect. That such is the law, if a well known principle is applied for the first time to produce a practical result for a special purpose, has never been disputed. It would be very strange and unjust to refuse the same legal effect, when the inventor has the additional merit of discovering the principle as well as its application to a practical object. The instant that the principle, although discovered for the first time, is stated, in actual application to, and as the agent of, producing a certain specified effect, it is no longer an abstract principle, it is then clothed with the language of practical application, and receives the impress of tangible direction to the actual business of human life."

[1] Barrett *v.* Hall, 1 Mas. 476.

of producing the effect in question, instead of being, what alone it should be, a claim for the particular application of the principle which the patentee professes to have made.

§ 144. This is well illustrated by several cases. In one, the invention claimed, was "the communication of motion from the reed to the yarn-beam, in the connection of the one with the other, which is produced as follows," describing the mode. The patent was sustained, only by construing it as a claim for the specific machinery invented by the patentee for the communication of motion from the reed to the yarn-beam, specially described in the specification. As a claim for all possible modes of communicating the motion, &c., it would have been utterly void.[1] In another case, a patent "for an improvement in the art of making nails, by means of a machine which cuts and heads the nails at one operation," was seen at once not to be a grant of an abstract principle, but of a combination of mechanical contrivances operating to produce a new effect, and constituting an improvement in the art of making nails.[2] So too, where the patentee, in a patent for a machine for turning irregular forms, claimed "the method or mode of operation in the abstract explained in the second article, whereby the infinite variety of forms, described in general terms in this article may be turned or wrought," and the second article in his specification explained the structure of a machine, by which that mode of operation was carried into effect, and the mode of constructing such a machine so as to effect the different objects to be accomplished, it was held that the specification did not claim an abstract principle or function, but a machine.[3] So also, it has

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[1] Stone *v.* Sprague, 1 Story's R. 270.

[2] Gray *v.* James, Peters's Circ. C. R. 394.

[3] Blanchard *v.* Sprague, 2 Story's R. 164, 170. In this case, Mr. Justice Story said, "Looking at the present specification, and construing all its terms together, I am clearly of opinion, that it is not a patent claimed for a mere function; but it is claimed for the machine specially described in the specification; that is, for a function as embodied in a particular machine,

been held that the making of wheels on a particular principle which is described in the specification, is the subject of a patent;[1] and where the plaintiff claimed as his invention "the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acts as a counter-balance to the pressure against the back of such chair, as above described," it was held not to be a claim to a principle, but to an application to a certain purpose, and by certain means.[2]

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whose mode of operation and general structure are pointed out. In the close of his specification, the Patentee explicitly states that his "invention is described and explained in the second article of his specification, to which reference is made for information of that, which constitutes the principal or character of his machine or invention, and distinguishes it, as he verily believes, from all other machines, discoveries or inventions known or used before." Now, when we turn to the second article, we find there described not a mere function, but a machine of a particular structure, whose modes of operation are pointed out, to accomplish a particular purpose, function, or end. This seems to me, sufficiently expressive to define and ascertain what his invention is. It is a particular machine, constituted in the way pointed out, for the accomplishment of a particular end or object. 'The patent is for a machine, and not for a principle or function detached from machinery."

[1] Jones *v.* Pearce, Webs. Pat. Cas. 123.

[2] Minter *v.* Williams, Webs. Pat. Cas. 134. "*Godson*, in pursuance of leave reserved, moved for a nonsuit, on the ground that the specification is for a principle, the plaintiff having summed up the whole of his patent in his claim to the principle, and not to any particular means. Either the plaintiff claims a principle, or he does not; to the former he is not entitled; and as to the latter, the defendant has not used the mechanical means of the plaintiff." [Lord *Lyndhurst*, C. B.: He says, "What I claim as my invention is the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acts as a counterbalance to the pressure against the back of such chair, as above described." This is what he claims, a self-adjusting leverage acting in that way. Then he points out the particular mode in which that is effected. The question, therefore, is, whether you have infringed that particular method.] [*Alderson*, B.: All the witnesses proved that there never had been a self-adjusting leverage in a chair before.] That I admit, and contend that this case is nearly the same as K. *v.* Cutler, (1 Stark. 354; Webs. Pat. Cas. 76, n.) [Lord *Lyndhurst*, C. B.: He says, "I claim the application of a self-adjusting leverage to the back and seat of a chair," so as to produce such an effect.] Yes, my lord,

§ 145. But on the other hand, a claim to a principle, to be carried into effect by any means, without describing an applica-

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that effect being nothing more than the motion of a lever backwards and forwards, producing such an effect. [Lord *Lyndhurst*, C. B.: It is the application of a self-adjusting leverage to the back and seat of a chair, he having described what that self-adjusting leverage was before. Any application of a self-adjusting leverage to the back and seat of a chair producing this effect, that the one acts as a counterbalance to the pressure against the other, would be an infringement of this patent, but nothing short of that.] [*Alderson*, B.: The difference between this chair and all others, as it appeared in evidence, was very well described by Mr. Brunton; he says, this chair acts, (looking at the one you produced,) this chair acts, but not by a self-adjusting leverage. By pressing on the back the seat rises, and *vice versâ*, by pressing on the seat the back rises; that is what he calls a self-adjusting leverage. In the other case, you might sit forever, and the back would never rise.] The plaintiff, by his specification, has appropriated to himself a first principle in mechanics, viz., the lever, and therefore nobody else may use it. [Lord *Lyndhurst*, C. B.: It is not a leverage only, but the application of a self-adjusting leverage; and it is not a self-adjusting leverage only, but it is a self-adjusting leverage producing a particular effect, by the means of which the weight on the seat counterbalances the pressure against the back.] This is nothing more than one of the first principles of mechanics. [*Parke*, B.: But that, not being in combination before, can that not be patented? It is only for the application of a self-adjusting leverage to a chair — cannot he patent that? He claims the combination of the two, no matter in what shapes or way you combine them; but if you combine the self-adjusting leverage, which he thus applies to the subject of a chair, that is an infringement of his patent.] What is the combination? [Lord *Lyndhurst*, C. B.: Why the application of a self-adjusting leverage producing a particular effect. He says, I do not confine myself to the particular shape of this lever.] If your lordships translate this to mean machine, of course I have no further argument to urge. [Lord *Lyndhurst*, C. B.: It is every machine consisting of a self-adjusting leverage producing that particular effect in a chair.] That is the extent to which I am putting it. If your lordships say you can, in favor of the patentee, so read it, that it is the machine and the combination only that the plaintiff has claimed, then I should be wasting your lordships' time if I argued the matter further. [Lord *Lyndhurst*, C. B.: Substantially that combination.] [*Parke*, B.: Therefore a chair made upon that principle which you have directed to be constructed here, would be an infringement of his patent, that is, the application of a self-adjusting leverage to a chair, such a one as you have produced here to-day.] [Lord *Lyndhurst*, C. B.: It has the particular effect.] Rule refused.

tion of the principle by some means, is a claim to the abstract principle. As, where a specification stated that "It is claimed as new, to cut ice of a uniform size by means of an apparatus worked by any other power than human," it was held that this claim to the art of cutting ice by means of any other power than human was utterly void.[1] It is, therefore, essential that the specification should describe some practical mode of carrying the principle into effect; and then the subject-matter will be patentable, because it will be, not the principle itself, but the mode of carrying it into effect; and on the question of infringement it will be for the jury to say, whether another mode of carrying it into effect is not a colorable imitation of the mode invented by the patentee.[2]

§ 146. This being the case, the question next arises whether it is necessary, after having described the application of the principle by some mechanical contrivance, or other arrangement of matter, to claim in the specification all the other forms of apparatus, or modifications of matter, by which the principle may also be applied in order to produce the same beneficial

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[1] Wyeth *v.* Stone, 1 Story's R. 271, 285.

[2] In Neilson *v.* Harford, Webs. Pat. Cas. 342. Alderson, B. said, "I take the distinction between a patent for a principle, and a patent which can be supported, is, that you must have an embodiment of the principle in some practical mode described in the specification of carrying the principle into actual effect, and then you take out your patent, not for the principle, but for the mode of carrying the principle into effect. In Watt's patent, which comes the nearest to the present of any you can suggest, the real invention of Watt was, that he discovered that by condensing steam in a separate vessel a great saving of fuel would be effected by keeping the steam cylinder as hot as possible, and applying the cooling process to the separate vessel, and keeping it as cool as possible, whereas, before, the steam was condensed in the same vessel; but, then, Mr Watt carried that practically into effect, by describing a mode which would effect the object. The difficulty which presses on my mind here is, that this party has taken out a patent, in substance like Watt's, for a principle, that is, the application of hot air to furnaces, but he has not practically described any mode of carrying it into effect. If he had, perhaps he might have covered all other modes, as being a variation."

effect, or whether the patent does not cover all these, without particular description, by covering the application of the principle. When we consider that the subject-matter of such a patent is the application of the principle effected by means of some machinery, or other arrangement, it will be apparent that the reason why the patentee is bound to describe some machinery or practical method of making the application, is in order to show that he has actually applied the principle, and to enable others to do so after him. But the real subject of the patent is the practical application of the principle; and hence, although the means by which the patentee has made that application must be described, in order to show that he has done what he says he has done, and to enable others to do what he says can be done, yet a variation of the means and machinery, if it produces the same beneficial effect, that is, (is) the same application of the same principle, does not show that the party making such variation has not infringed the patent, by making use of that which exclusively belonged to another, viz., the application of the principle to produce a particular effect.

§ 147. Examples will best illustrate this distinction. Minter's patent, for a self-adjusting chair, which has been already referred to, was a case of the application of a well known principle, that of the lever, for the first time applied to a chair. He made no particular claim of shape or form for the construction of the chair, but showed that if a lever was applied to the back of the chair, so that the weight of the seat would act as a counterpoise to the back, in whatever posture the occupant might be sitting or reclining, a self-adjusting chair would be obtained. Now, there might be various modes of constructing a chair on this principle; but as the constructing of chairs on this principle was the true subject of the patent, the court held the making of any chair upon the same principle of a self-adjusting leverage, was an infringement.[1]

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[1] Minter *v.* Wells, Webs. Pat. Cas. 134.

§ 148. Neilson's patent involved the principle of blowing furnaces, for the smelting of iron, with a blast of hot air, instead of cold, and he applied that principle by finding out a mode by which air may be introduced in a heated state into the furnace, viz., by heating the air in a close vessel between the blowing apparatus and the furnace. The specification, after stating that the air, heated up to red heat, may be used, but that it is not necessary to go so far to produce a beneficial effect, proceeded to state that the size of the receptacle would depend on the blast necessary for the furnace, and gave directions as to that. It then added, "The shape of the receptacle is immaterial to the effect, and may be adapted to local circumstances." After great consideration, it was held that the word "effect" was not meant to apply to the degree of heat to be given to the air in the heating receptacle, but that any shape of the heating receptacle would produce the beneficial effect of passing heated air into the furnace. This construction settled what the patent was for, viz., the application of the principle of blowing with hot air, by means of a vessel in which the air should be heated on its passage from the blowing apparatus to the furnace. Consequently the subject-matter embraced all the forms of apparatus by which the application of the same principle could be effected.[1]

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[1] Neilson *v.* Harford, Webs. Pat. Cas. 295, 369. The same patent was litigated in Scotland, and, upon the point of the generality of the claim, as regards the forms of the apparatus, Lord Justice Clerk Hope made the following observations to the jury: "Is it any objection, then, in the next place, to such a patent, that terms descriptive of the application to a certain specified result include every mode of applying the principle or agent so as to produce that specified result, although one mode may not be described more than another — although one mode may be infinitely better than another — although much greater benefit would result from the application of the principle by one method than by another — although one method may be less expensive than another? Is it, I next inquire, an objection to the patent, that, in its application of a new principle to a certain specified result, it includes every variety of mode of applying the principle according to the general statement of the object and benefit to be attained? You will observe,

§ 149. In this case, it was also laid down by Parke, B. to the jury, that the omission to mention in the specification any

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that the greater part of the defenders' case is truly directed to this objection. This is a question of law, and I must tell you distinctly, that this generality of claim, that is, for all modes of applying the principle to the purpose specified, according to or within a general statement of the object to be attained, and of the use to be made of the agent to be so applied, is no objection whatever to the patent. That the application or use of the agent for the purpose specified, may be carried out in a great variety of ways, only shows the beauty, and simplicity, and comprehensiveness of the invention. But the scientific and general utility of the proposed application of the principle, if directed to a specified purpose, is not an objection to its becoming the subject of a patent. That the proposed applications may be very generally adopted in a great variety of ways, is the merit of the invention, not a legal objection to the patent.

The defenders say — you announce a principle, that hot air will produce heat in the furnace; you direct us to take the blast without interrupting, or rather without stopping it, to take the current in blast, to heat it after it leaves the blast, and to throw it hot into the furnace. But you tell us no more — you do not tell us how we are to heat it. You say you may heat in any way, in any sort of form of vessel. You say, I leave you to do it how you best can. But my application of the discovered principle is, that if you heat the air, and heat it after it leaves the blowing engine (for it is plain you cannot do it before,) you attain the result I state: that is the purpose to which I apply the principle. The benefit will be greater or less, I only say, benefit you will get, I have disclosed the principle; I so apply it to a specified purpose by a mechanical contrivance, viz., by getting the heat when in blast, after it leaves the furnace; but the mode and manner, and extent of heating, I leave to you, and the degree of benefit, on that very account, I do not state. The defenders say, the patent, on this account, is bad in law. I must tell you, that taking the patent to be of this general character, it is good in law.' I state to you the law to be, that you may obtain a patent for a mode of carrying a principle into effect; and if you suggest and discover, not only the principle, but suggest and invent how it may be applied to a practical result by mechanical contrivance and apparatus, and show that you are aware that no particular sort or modification, or form of the apparatus, is essential, in order to obtain benefit from the principle, then you may take your patent for the mode of carrying it into effect, and you are not under the necessity of describing and confining yourself to one form of apparatus. If that were necessary, you see, what would be the result? Why, that a patent could hardly ever be obtained for any mode of carrying a newly-discovered principle into practical results, though the most valuable of all

thing which the patentee knows to be necessary for the beneficial enjoyment of the invention is a fatal defect; but the omission to mention something which contributes only to the degree

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discoveries. For the best form and shape or modification of apparatus. cannot in matters of such vast range, and requiring observation on such a great scale, be attained at once; and so the thing would become known, and so the right lost, long before all the various kinds of apparatus could be tried. Hence you may generally claim the mode of carrying the principle into effect by mechanical contrivance, so that any sort of apparatus applied in the way stated will, more or less, produce the benefit, and you are not tied down to any form.

The best illustration I can give you, and I think it right to give you this illustration, is from a case as to the application of that familiar principle, the lever to the construction of chairs, or what is called the self-adjusting lever. (Minter's Patent, Webs. Pat. Cas. 126 and 134.) This case, which afterwards came under the consideration of the whole court, was tried in the Court of Exchequer during the presidency of Lord Lyndhurst. The case was as to the patent reclining chair, the luxury of which some of you may have tried; it had a self-adjusting lever, so that a person sitting or reclining, and I need not tell you what variety of postures can be assumed by a person reclining in a chair — in whatever situation he placed his back, there was sufficient resistance offered through means of the lever, to preserve the equilibrium. Now anything more general than that I cannot conceive; it was the application of a well-known principle, but for the first time applied to a chair. He made no claim to any particular parts of the chair, nor did he prescribe any precise mode in which they should be made; but what he claimed was a self-adjusting lever to be applied to the back of a chair, where the weight of the seat acts as a counterpoise to the back, in whatever posture the party might be sitting or reclining. Nothing could be more general. Well, a verdict passed for the patentee, with liberty to have it set aside; but Lord Lyndhurst and the rest of the court held, that this was not a claim to a principle, but to the construction of a chair on this principle, in whatever shape or form it may be constructed. (Minter *v.* Wells. Webs. Pat. Cas. 134.) Just so as to the hot blast, only the principle is also new. The patentee says, "I find hot air will increase the heat in the furnace, that a blast of hot air is beneficial for that end." Here is the way to attain it — "heat the air under blast, between the blowing apparatus and the furnace; if you do that, I care not how you may propose to do it — I neither propose to you, nor claim, any special mode of doing it; you may give the air more or less degrees of heat; but if you so heat it, you will get by that contrivance the benefit I have invented and disclosed, more or less, according to the degree of heat." This is very simple, very general: but its sim-

of benefit, provided the apparatus would work beneficially and be worth adopting, is not a fatal defect.[1]

§ 150. As it is the duty of the court to determine on the construction of the patent, what the subject-matter is, it is often necessary to decide whether the patentee claims a combination of several things, or the distinct invention of several things, or both. General principles cannot be laid down for the determination of questions of this kind, depending exclusively on the particular facts. There is, however, one circumstance, that will always be decisive, in construing a patent, against a claim for the several things described in the specification, and that is, that one or more of them is not new. If this turns out to be the case, the question may then be, whether the patent can be sustained for the combination.[2] In determining this question it is to be observed that a patent for a combination of three things cannot at the same time be a patent for a combination of any two of them. If the subject-matter is the combination of any given number of things, or processes, or parts, no portion of the combination less than the whole can be considered at the same time as being also the subject-matter.[3]

§ 151. The rule which we have thus endeavored to illustrate, which requires the patentee so to describe his invention as to enable the public to know what his claim is, of course imposes upon him the duty of not misleading the public, either by concealing anything material to the invention, or by adding any-

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plicity is its beauty and its practical value — not an objection in law." The Household Company *v.* Neilson, Webs. Pat. Cas. 684, 686.

[1] Neilson *v.* Harford, Webs. Pat. Cas. 317.

[2] For some of the cases where the question has been between a combination or a claim for several distinct things, see Howe *v.* Abbott, 2 Story's R. 190; Ames *v.* Howard, 1 Sumner, 482; Prouty *v.* Ruggles, 16 Peters, 336; S. C. Prouty *v.* Draper, 1 Story, 568; Pitts *v.* Whitman, 2 Story's R. 609; Carver *v.* Braintree Manuf. Company, 2 Story's R. 432.

[3] Prouty *v.* Draper, 1 Story, 568, 572; S. C. Prouty *v.* Ruggles, 16 Peters, 336.

thing not necessary to be introduced. The ambiguity which we have been considering in the preceding pages may be produced involuntarily; but there is a special provision of the statute aimed at the voluntary concealment or addition of anything material. The statute enacts it as one of the defences to an action on a patent, that the specification "does not contain the whole truth relative to his invention or discovery, or that it contains more than is necessary to produce the described effect; which concealment or addition shall fully appear to have been made for the purpose of deceiving the public."[1] This defence will be made good, when it appears that the patentee fraudulently concealed something that he knew to be material to the practice of his invention, or fraudulently added something which he knew was not useful, material, or necessary, at the time when he prepared his specification. If it was subsequently discovered not to be useful, material, or necessary, his patent will not be affected by it.[2]

§ 152. II. The second rule for preparing a specification is,

To describe the invention in such a manner as to enable the public to practice it, from the specification alone.

§ 153. The statute requires the patentee to describe "the manner and process of making, constructing, using, and compounding his invention or discovery, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of any machine, he shall fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall

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[1] Act of July 4th, 1846, § 15.

[2] See *Post*, in the chapter on Infringement, and also in the chapter on Remedy by Action.

particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery."

§ 154. We have seen that the question whether a specification answers this requisite of the statute, is a question of fact for the jury; and although it is not necessary that technical terms should be made use of in a specification, they often are made use of and often require to be explained by evidence. In judging of a specification, therefore, a distinction must be taken between that sort of ambiguity which a person unacquainted with technical terms would encounter, and the ambiguity which might appear to a person skilled in the particular art. It is not necessary that the specification should contain an explanation level with the capacity of every person, which would often be impossible.[1] The statute allows the patentee to address himself to persons of competent skill in the art, and it requires him to use such full, clear, and exact terms as will enable that class of persons to reproduce the thing described from the description itself. It is, therefore, important to ascertain what the rules of construction are, which define what will constitute an ambiguity or uncertainty to artists and persons skilled in the subject.

§ 155. And *first* with regard to the persons whose judgment and apprehension are thus appealed to: they are not those who possess the highest degree of skill or knowledge in the particular art or science, to which the subject-matter belongs, nor are they day-laborers; they are practical workmen, or persons of reasonably competent skill in the particular art, science, or branch of industry. If persons of the highest skill were those whom the law has in contemplation, the object of a specification, which is to enable competent persons to reproduce the thing patented, without making experiments, inventions, or additions of their own, could not generally be answered.[2]

[1] Per Story J. in Lowell *v.* Lewis, 1 Mas. 182.

[2] The King *v.* Arkwright, Dav. Pat. Cas. 106; Webs. Pat. Cas. 64.

§ 156. *Secondly*, as to the application of their knowledge and skill, by such persons, to the understanding and carrying out of the description given by the patentee. The description must be such as will enable persons of competent skill and knowledge to construct or reproduce the thing described, without invention or addition of their own, and without repeated experiments.[1] Thus it has been held, that any material alteration to be made in existing apparatus or machinery, must be stated, and not left to be supplied by the workman; as, with reference to the materials employed, or their form, or the speed of the parts, or their relative dimensions, where these are material.[2] So, too, the specification is insufficient, if information must be derived from experiments, or from seeing others make the thing described;[3] or as it has also been said, if it requires the solu-

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Lowell *v.* Lewis, 1 Mas. 182; Harman *v.* Playne, 11 East, 101. And see particularly the observations of M. Baron Parke, cited *Post*, from Neilson *v.* Harford.

[1] The King *v.* Arkwright, Webs. Pat. Cas. 66, 67, 69, 70. It will not do to rely for the correction of errors on the ordinary knowledge of competent workmen. In Neilson *v.* Harford, the specification contained a particular passage, which the jury found to be untrue; but they also found that any workman of competent knowledge of the subject would correct the statement. Parke, B., "Nor do we think that the point contended for by Sir William Follett, that if a man acquainted well with the process of heating air were employed, this misstatement would not mislead him, would at all relieve the plaintiffs from the difficulty; for this would be to support the specification by a fresh invention and correction by a scientific person, and no authority can be found that in such a case a specification would be good. To be valid, we think it should be such as, if fairly followed out by a competent workman, without invention or addition, would produce the machine for which the patent is taken out, and that such machine so constructed must be one beneficial to the public." Webs. Pat. Cas. 37.

[2] *Ibid.* p. 67.

[3] *Ibid.* p. 67, 70, 71. Upon this point, Buller J. said, "Immison says, that from the specification he should have made a parallel cylinder, and not a spiral one, but this is the one used by the defendant. As to the rollers, it does not appear from the specification some were to go faster than others; from the specification, without other sources, it is impossible to say how they should be made, as there is no scale or plan to work by. A roller is

tion of a problem.[1] And, generally, a specification, to be valid, must be such as, when fairly followed out by a competent

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necessary to the feeder to give regular direction to the work; it will not answer without it. From the knowledge he has now, he should add a roller if he was directed to make the machine. But that does not prove the specification to be sufficient, because, if a man, from the knowledge he has got from three trials, and seeing people immediately employed about it, is able to make use of it, it is his ideas improve the plan, and not the merit of the specification; if he makes it complete, it is his ingenuity, and not the specification of the inventor." . . . "Upon the other hand, several respectable people are called upon the part of the defendant, who say they could do it, but there is this difference in their description; most, if not every one of them, have looked at and seen how the machines were worked by the defendant, and have got their knowledge by other means, and not from the specification and plan alone; besides, they admit the manner the defendant works it is not consistent with the plan laid down, particularly as to the cylinder, a particular part of the business, for Moore says, this upon the face of it, must be taken to be a parallel, whereas that which plainly appears to be used is a spiral; besides, after all this they have spoken most of them in a very doubtful way, particularly Mr. Moore, who qualified his expression in the way which I have stated to you, and the others qualifying their expressions, saying they think upon the whole they could do it. Suppose it perfectly clear they could with the subsequent knowledge they had acquired, yet, if it be true that sensible men, that know something of this particular business, and mechanics in general, cannot do it, it is not so described as is sufficient to support this patent."

[1] In Morgan *v.* Seaward, Webs. Pat. Cas. 170, 174, Alderson, B. said, "It the invention can only be carried into effect by persons setting themselves a problem to solve, then they who solve the problem become the inventors of the method of solving it, and he who leaves persons to carry out his invention by means of that application of their understanding, does not teach them in his specification that which, in order to entitle him to maintain his patent, he should teach them the way of doing the thing, but sets them a problem, which being suggested to persons of skill, they may be able to solve. That is not the way in which a specification ought to be framed. It ought to be framed so as not to call on a person to have recourse to more than those ordinary means of knowledge (not invention) which a workman of competent skill in his art and trade may be presumed to have. You may call upon him to exercise all the actual existing knowledge common to the trade, but you cannot call upon him to exercise anything more. You have no right to call upon him to tax his ingenuity or invention.

workman, without invention or addition, the object of the patent may be obtained.[1]

Those are the criteria by which you ought to be governed, and you ought to decide this question according to those criteria. You are to apply those criteria to the case now under consideration, and you should apply them without prejudice, either one way or the other, for it is a fair observation to make, that both parties here stand, so far as this observation is concerned, on a footing of perfect equality. The public, on the one hand, have a right to expect and require that the specification shall be fair, honest, open, and sufficient; and, on the other hand, the patentee should not be tripped up by captious objections, which do not go to the merits of the specification. Now, applying those criteria to the evidence in the cause, if you shall think that this invention has been so specified that any competent engineer, having the ordinary knowledge which competent engineers possess, could carry it into effect by the application of his skill, and the use of his previous knowledge, without any inventions on his part, and that he could do it in the manner described by the specification, and from the information disclosed in the specification, then the specification would be sufficient. If, on the other hand, you think that engineers of ordinary and competent skill would have to set themselves a problem to solve, and would have to solve that problem before they could do it, then the specification would be bad." See also Gray *v.* James, 1 Pet. C. C. R. 376.

[1] In Neilson *v.* Harford, Webs. Pat. Cas. 295, 313, Parke B. instructed the jury as follows: "Now, then, understanding the meaning of this specification to be the sense I have given to it, that he claims as his invention a mode of heating the blast between the blowing apparatus and the furnace, in a vessel exposed to the fire, and kept to a red heat, or nearly, (and which description I think sufficient) of the size of a cubic foot for a smith's forge, or the other size mentioned, or of any shape, these questions will arise for your decision. It is said that, understanding it in that sense, the patent is void, because there are no directions given for any mode of constructing the instrument. But understanding the patent in that sense, it seems to me, that if you should be of opinion that a person of competent skill (and I will explain to you what I mean by that) would nevertheless construct such a vessel as would be productive of some useful and beneficial purpose in the working of iron, that the patent nevertheless is good, though no particular form of vessel is given. Then it is to be recollected that this claim is a patent right, — a right of heating in any description of vessel; and in order to maintain that right, it is essential that the heating in any description of vessel, either the common form, the smith's forge, the cupola, or the blast furnace, that it should be beneficial in any shape you may choose for all those three pur-

§ 157. Slight defects in a specification will sometimes prevent the object of the patent from being obtained, by any competent person who may undertake to apply it, and will therefore render the patent void, because they create a necessity for the exercise of inventive power on the part of the person who thus

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poses. Now, then, I think, therefore, that this is correctly described in the patent; and if any man of common understanding, and ordinary skill and knowledge of the subject, and I should say in this case that the subject is the construction of the blowing apparatus; such a person as that is the person you would most naturally apply to in order to make an alteration of this kind; if you are of opinion on the evidence, that such a person as that, of ordinary skill and knowledge of the subject, (that is, the construction of the old blowing apparatus,) would be able to construct, according to the specification alone, such an apparatus as would be an improvement, that is, would be productive practically of some beneficial result, no matter how great, provided it is sufficient to make it worth while (the expense being taken into consideration) to adapt such an apparatus to the ordinary machinery in all cases of forges, cupolas, and furnaces, where the blast is used; in that case, I think the specification sufficiently describes the invention, leaving out the other objection (to which I need not any further direct your attention) that there is not merely a defective statement in the specification, unless those conditions were complied with, but there is a wrong statement. But leaving out the wrong statement for the present, and supposing that it was not introduced, then if, in your opinion, such a person as I have described — a man of ordinary and competent skill — would erect a machine which would be beneficial in all those cases, and be worth while to erect; in that case it seems to me that this specification is good, and the patent, so far as relates to this objection, will be good. It is to be a person only of ordinary skill and ordinary knowledge. You are not to ask yourselves the question, whether persons of great skill — a first-rate engineer, or a second-class engineer, as described by Mr. Farey — whether they would do it; because generally those persons are men of great science and philosophical knowledge, and they would upon a mere hint in the specification probably invent a machine which should answer the purpose extremely well; but that is not the description of persons to whom this specification may be supposed to be addressed — it is supposed to be addressed to a practical workman, who brings the ordinary degree of knowledge and the ordinary degree of capacity to the subject; and if such a person would construct an apparatus that would answer some beneficial purpose, whatever its shape was, according to the terms of this specification, then I think that this specification is good, and the patent may be supported so far as relates to that."

undertakes to apply the description. As, the omitting to state the use of tallow, which the patentee employed for facilitating the manufacture of steel trusses ;[1] or, in a patent medicine, stating the ingredients without stating the proportions.[2] If anything be omitted, which gives an advantageous operation to the thing invented, it will vitiate the patent ; as the omission to state the use of a material, *aqua-fortis*, which the patentee used himself for obtaining the effect more rapidly ;[3] for the patentee is bound to give the most advantageous mode known to him, and any circumstance conducive to the advantageous operation ; otherwise, he does not pay the price for his monopoly, because he does not give the public the benefit of all that he knows himself.[4]

§ 158. So, too, if a specification directs the use of a substance, which, as generally known, contains foreign matter, the presence of which is positively injurious, and does not show any method of removing that foreign matter, or refer to any method generally known, or state how the substance in a proper state can be procured, the specification will be defective.[5]

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[1] Liardet *v.* Johnson, Webs. Pat. Cas. 53.

[2] Ibid, 54, note.

[3] Wood *v.* Turner, Webs. Pat. Cas. 82.

[4] Morgan *v.* Seaward, Webs. Pat. Cas. 175, 182. See the remarks of Alderson, B. cited *ante*. See also, The King *v.* Arkwright, Webs. Pat. Cas. 66 ; Walton *v.* Bateman, Ibid. 622 ; Turner *v.* Winter, Ibid, 81, where the employment of cheaper materials than those mentioned in the specification, or the insertion of materials which would not answer, were said to be sufficient to avoid a patent.

[5] Derosne *v.* Fairie, Webs. Pat. Cas. 154, 162. In this very instructive case, Lord Abinger, C. B. said ; "Upon the main point, however, that respecting the bituminous schistus, nothing that I have heard has removed my original impression, that there was no evidence to show that this process, carried on with bituminous schistus, combined with any iron whatsoever, would answer at all. The plaintiff himself has declared, that in that bituminous schistus, which he himself furnished, the whole of the iron was extracted ; and it appears, that it was admitted by the counsel, that the presence

§ 159. In like manner, a specification will be defective, if an article be described by a particular name, the patentee knowing that the requisite article cannot ordinarily be procured under the name by which it is described in the specification, and it be not stated where it may be procured; because the public have not that full and precise information which they have a right to require.[1] A specification will also be defective, which states

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of iron would not only be disadvantageous, but injurious. Thus, then it appearing by the evidence, that in all the various forms in which the article exists in this country, sulphuret of iron is found, and the witnesses not describing any known process by which it can be extracted, it appears to me that the plaintiff ought to prove one of two things — either that the sulphuret of iron in bituminous schistus, is not so absolutely detrimental as to make its presence disadvantageous to the process, (in which case, this patent would be good, or that the process of extracting the iron from it is so simple and well known, that a man may be able to accomplish it with ease. As the bituminous schistus which was procured and used, was exclusively that which was furnished by the plaintiff, not in its original state, but after it had undergone distillation, and had been made into charcoal in a foreign country, and as in that stage of its preparation, it could not be discovered by examining it, whether it was made from one substance or another, (the residuum, after distillation, of almost every matter, vegetable as well as animal, being a charcoal mixed more or less with other things,) then there is only the plaintiff's statement to prove that the substance which was furnished by him and used, was charcoal of bituminous schistus. It appeared, also, that he had declared to one of the witnesses, that he had extracted all the iron from the substance so sent, and that it also underwent another process. I am, therefore, of opinion, that without considering whether or not the patent would be avoided by the process requiring the use of means to extract the iron from the bituminous schistus, which were kept secret by the patentee, he has not shown in this case, that what he has described in the patent could be used as so described, without injury to the matter going through the process. Under all these circumstances, I think that the plaintiff ought to have given some evidence to show that bituminous schistus, in the state in which it is found and known in England, could be used in this process with advantage, and as he has not done that, the defendants are entitled to a nonsuit; but, at the same time, as it is alleged that the plaintiff may supply the defect of proof, as to the schistus on a new trial by other evidence, we are desirous that the patent, if a good one, should not be affected by our judgment, and think it right to direct a new trial on the terms which have been stated."

[1] Sturz *v.* De La Rue, Webs. Pat. Cas. 83.

that the manner in which a power is to be applied varies with the circumstances in some measure, without showing in what the improvement consists, as distinguished from all former modes of doing the same thing.[1] If obscure terms be employed for the sake of concealment, so as to induce the belief that elaborate processes are necessary, when the simplest will succeed, the specification is bad;[2] and if a patentee states that he prefers a certain material, having ascertained that no other will answer, he misleads the public.[3]

§ 160. The rule, however, which forbids a patentee to leave the public to find out by experiment how to apply his discovery or invention, is subject to one important limitation. If, for instance, the specification of a patent for a composition of matter is so drawn, that no one can use the invention, without first ascertaining by experiment the exact proportion of the different ingredients required to produce the intended result, the patent will be void. But it has been determined by the Supreme Court of the United States, that if, in such a specification, the patentee gives a certain proportion as the general rule applicable to the ordinary state of the ingredients, he may, without the risk of having his patent declared void by the court, for vagueness and uncertainty, state other and variable proportions as exceptions to the rule, applicable to the varying states of the ingredients, although the precise proportion adapted to a given state of the ingredients, other than the usual state, can only be ascertained by computing it from the general rule, after the particular state of the ingredients is ascertained. In such cases, it is for the jury to decide, on the evidence of experts, whether the general rule given is susceptible of application, and whether it furnishes the means of determining the proportions to be used,

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[1] Sullivan *v.* Redfield, Paine's C. C. R. 441, 450, 451.

[2] Savoy *v.* Price, Webs. Pat. Cas. 83.

[3] Crompton *v.* Ibbotson, Ibid. 83.

in the excepted cases, by the exercise of the ordinary knowledge and skill of the workman.[1]

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[1] Wood *v.* Underhill, 5 How. S. C. R. 1, 3, 4. The specification in this case was as follows: "Be it known that I, the said James Wood, have invented a new and useful improvement in the art of manufacturing bricks and tiles. The process is as follows: Take of common anthracite coal, unburnt, such quantity as will best suit the kind of clay to be made into brick or tile, and mix the same, when well pulverized, with the clay before (it) is moulded; that clay which requires the most burning, will require the greatest proportion of coal-dust; the exact proportion, therefore, cannot be specified; but, in general, three-fourths of a bushel of coal-dust to one thousand brick will be correct. Some clay may require one-eighth more, and some not exceeding a half-bushel. The benefits resulting from this composition, are the saving of fuel, and the more general diffusion of heat through the kiln, by which the contents are more equally burned. If the heat is raised too high, the brick will swell, and be injured in their form. If the heat is too moderate, the coal dust will be consumed before the desired effect is produced. Extremes are therefore to be avoided. I claim as my invention, the using of fine anthracite coal, or coal dust, with clay, for the purpose of making brick and tile as aforesaid, and for that only, claim letters-patent from the United States." Mr. Ch. Justice Taney delivering the judgment of the court, said, "The plaintiff claims that he has invented a new and useful improvement in the art of manufacturing bricks and tiles; and states his invention to consist in using fine anthracite coal, or coal dust, with clay, for the purpose of making brick or tile; and for that only, he claims a patent. And the only question presented by the record is, whether his description of the relative proportions of coal-dust and clay, as given in his specification, is upon the face of it too vague and uncertain to support a patent. The degree of certainty which the law requires is set forth in the act of Congress. The specification must be in such full, clear and exact terms, as to enable any one skilled in the art to which it appertains, to compound and use it without making any experiments of his own. In patents for machines, the sufficiency of the description must, in general, be a question of fact to be determined by the jury. And this must also be the case in compositions of matter, where any of the ingredients mentioned in the specification do not always possess exactly the same properties in the same degree. But when the specification of a new composition of matter gives only the names of the substances which are to be mixed together, without stating any relative proportion, undoubtedly, it would be the duty of the court to declare the patent to be void. And the same rule would prevail where it was apparent that the proportions were stated ambiguously and vaguely. For in such cases it

§ 161. But although it is necessary that a specification should clearly and fully describe the invention, and should give the best process, materials, and methods, known to the inventor, yet it is not necessary for the patentee to describe the mode of making everything which he uses, or detail known processes, or explain the terms appropriate to the particular art, or science, or

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would be evident, on the face of the specification, that no one could use the invention without first ascertaining by experiment, the exact proportion of the different ingredients required to produce the result intended to be obtained. And if the specification before us was liable to either of these objections, the patent would be void, and the instruction given by the Circuit Court undoubtedly right. But we do not think this degree of vagueness and uncertainty exists. The patentee gives a certain proportion as a general rule; that is, three-fourths of a bushel of coal-dust to one thousand bricks. It is true, he also states that clay which requires the most burning, will require the greatest proportion of coal-dust; and that some clay may require one-eighth more than the proportions given, and some not more than half a bushel instead of three-fourths. The two last mentioned proportions may, however, be justly considered as exceptions to the rule he has stated; and as applicable to those cases only where the clay has some peculiarity, and differs in quality from that ordinarily employed in making bricks. Indeed, in most compositions of matter, some small difference in the proportions must occasionally be required, since the ingredients proposed to be compounded must sometimes be in some degree superior or inferior to those most commonly used. In this case, however, the general rule is given with entire exactness in its terms; and the notice of the variations, mentioned in the specification, would seem to be designed to guard the brick-maker against mistakes, into which he might fall if his clay was more or less hard to burn than the kind ordinarily employed in the manufacture. It may be, indeed, that the qualities of clay generally differ so widely, that the specification of the proportions stated in this case is of no value; and that the improvement cannot be used with advantage in any case, or with any clay, without first ascertaining by experiment the proportion to be employed. If that be the case, then the invention is not patentable. Because, by the terms of the Act of Congress, the inventor is not entitled to a patent. But this does not appear to be the case on the face of this specification. And whether the fact is so or not, is a question to be decided by a jury, upon the evidence of persons skilled in the art to which the patent appertains. The Circuit Court, therefore, erred in instructing the jury, that the specification was too vague and uncertain to support the patent, and its judgment must be reversed."

branch of industry to which his invention belongs.[1] The specification is, as we have seen, addressed to persons acquainted with the nature of the business; some technical knowledge is presumed on the part of those who will undertake, after the patent is expired, to carry out the invention; and such persons are to be called as witnesses to explain the language to the jury, while the patent is in force, and to show that it is capable of being understood by those to whom it is addressed. Accordingly it has been said, that a specification containing scientific terms, which are not understood, except by persons acquainted with the nature of the business, is not bad because an ordinary person does not understand it, provided a scientific person does; but a specification using common language, and stating that by which a common man may be misled, though a scientific man would not, when it does not profess to use scientific terms, and an ordinary man is misled by it, would not be good.[2] And it has been held that if a specification contain an untrue statement in a material circumstance, of such a nature that, if literally acted upon by a competent workman, it would mislead him, and cause the experiment to fail, the specification is therefore bad, and the patent invalidated, although the jury, on the trial of an action for the infringement of the patent, find that a competent workman, acquainted with the subject, would not be misled by the error, but would correct it in practice.[3]

§ 162. The specification need not describe that which is within the ordinary knowledge of any workman who would be employed to put up the apparatus; as, a condenser, in constructing a gas apparatus.[4] So, too, a deviation from the precise dimensions shown by the specification and model, so as to make

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[1] Per Lord Abinger C. B. in Neilson *v.* Harford, Webs. Pat. Cas. 341. See also Derosne *v.* Fairie, *Ibid.* 154, 167.

[2] Ibid.

[3] Neilson *v.* Harford, 8 M. & W. 806; S. C. Webs. Pat. Cas. 328.

[4] Crossley *v.* Beverley, Webs. Pat. Cas. 110, *note.*

different parts work together, is within the knowledge of any workman.[1] But if the practical application of the invention involves a particular kind of knowledge on the part of a workman, requiring him to do that which a person of ordinary engineering skill ought to know how to do, it must at least suggest to him that that thing is to be done, if it does not specifically point out the mode of doing it.[2] In like manner it is not ne-

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[1] Morgan *v.* Seaward, Webs. Pat. Cas. 176. In this case, Alderson, B. said to the jury, "In the case of the steam engine, there was put in on the part of the defendants, a model, made, as it was said, according to the specification, which model would not work. The model was a copy of the drawing, and would not work, because one part happened to be a little too small, whereas if it had been a little larger, it would have worked. Now, a workman of ordinary skill, when told to put two things together, so that they should move, would of course, by the ordinary knowledge and skill he possesses, make them of sufficient size to move. There he would have to bring to his assistance his knowledge that the size of the parts is material to the working of the machine. That is within the ordinary knowledge of every workman. He says, "I see this will not work, because it is too small," and then he makes it a little larger, and finds it will work; what is required is, that the specification should be such as to enable a workman of ordinary skill to make the machine; with respect to that, therefore, I do not apprehend you will feel much difficulty."

[2] In the case last cited, the same learned judge further instructed the jury as follows, "Mr. George Cottam says, 'It is a common problem to find a centre from three given points, and a person of ordinary engineering skill ought to be able to do that.' The question is, whether it ought not to be suggested to him by the specification, that that is the problem to be solved. Then Mr. Curtis says, 'I have made wheels on this plan.' You see he made the two wheels which were sent to the Venice and Trieste Company, but those were made under the direction of Mr. Galloway, the inventor. Now, it somewhat detracts from the weight due to his testimony, not as to his respectability, but as to the value of his evidence to you, that he had received the verbal instructions of Mr. Galloway. It may be, that he could do it because of his practice under Mr. Galloway; and it must be recollected that people in other places would not have that advantage. He says, he would not have any difficulty in doing it; and he says, 'I should not consider my foreman a competent workman unless he were able to make the wheel from the specification and drawings.' He says, 'I could alter the angle by altering the cranks.' The question is not, whether he could do that, but whether

cessary, in the description of a machine to state of what material every part should be made, where the principle of operation and the effect are the same, whether the parts be made of one material or another ;[1] but if a particular material be essential to the successful operation of the machine, as the patentee uses it, he must direct the use of that material.

§ 163. In the case of machinery, the statute directs the patentee to accompany his specification with "a drawing or drawings, and written references, where the nature of the case admits of drawings." The object of annexing drawings is both to distinguish the thing patented from other things known before, and to explain the mode of constructing the subject of the patent. It has been settled, that the drawings constitute a part of the specification, when annexed thereto, and may be used to explain or help out the otherwise imperfect description in the specification. So that it is not necessary that the description should be wholly in writing, but it may be partly in writing and partly in drawing ; and if, by a comparison of the words and the drawings, the one will explain the other sufficiently to enable a skilful mechanic to perform the work, and to show what is the invention claimed, the specification will be sufficient.[2] And it has been held, that in order to make a drawing when annexed to or accompanying a specification, part of the specification, so that the written description may be read by it, it is not necessary that the written description should contain references to the drawing ; that the direction in the statute, to annex "drawings and written references," means that where references from the writing to the drawing are necessary to the understanding

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he could alter the angle to a particular angle by altering the cranks in a particular way, that is, whether, having the angle given to him, he could make the alteration that was desired."

[1] Brooks *v.* Bicknell, 3 M'Lean's R. 250, 261.

[2] Earle *v.* Sawyer, 4 Mas. 1, 9; Bloxam *v.* Elsee, 1 Car. & P. 558; Brunton *v.* Hawkes.

of the machine or improvement, they are to be made; but that the description of many machines or improvements, when accompanied by a drawing, may be perfectly understood with references in the description itself.[1]

§ 164. It was formerly held in England that the drawings annexed to specifications ought to be drawn on a scale; so that the relation and proportion of the parts to each other, and the dimensions of the different parts might appear in due ratio to each other.[2] But this rule has been modified; and it seems now to be considered that if a mechanic can make the subject of the patent from the drawing in perspective, it is not necessary that there should be a scale.[3] Indeed, it is a necessary consequence of the rule which makes the written description open to explanation by the drawing, to hold that the drawing is open to explanation by the written description. So long as both together enable the public to know and practice the invention, it must be immaterial whether the drawing is made upon a scale or not. But if the subject of the patent could not be made, without many experiments, unless the drawing is upon a scale, then undoubtedly the whole specification taken together, being the written description and the drawing, would be defective.

§ 165. It should not be forgotten, that the statute requires a formal attestation of the specification and drawings. They must be signed by the inventor and by two witnesses.[4] It has been suggested, that the signing of the specification referring to the drawings is in effect attesting the drawings.[5] But whether

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[1] Brooks *v.* Bicknell, 3 M'Lean's R. 250, 261: Washburn *v.* Gould, 3 Story's R. 122, 133.

[2] The King *v.* Arkwright, Dav. Pat. Cas. 114.

[3] Godson on Patents, p. 137.

[4] Act of July 4, 1836, § 6, "which description and drawings, signed by the inventor and attested by two witnesses, shall be filed in the patent office."

[5] Phillips on Patents, p. 302, 303.

the statute is to be so construed as to require both the specification and the drawings to be signed, has not been decided.

§ 166. Provision is made by the thirteenth section of the Act of 1836 for the amendment of the specification by the addition of new improvements made after the patent has issued. The description of any such new improvement may be filed in the patent office, and is directed to be annexed by the commissioner to the original specification, with a certificate of the time of its being so annexed, and thereafter it is to have the same effect as if it had been embraced in the original specification.[1]

§ 167. A still further provision is made for the amendment of a redundant specification, by the filing of a *Disclaimer*. The Act of 1837, ch. 45, § 7, provides, that, "whenever any patentee shall have, through inadvertence, accident, or mistake, made his specification of claim too broad, claiming more than that of which he was the original or first inventor, some material and substantial part of the thing patented being truly and justly his own, any such patentee, his administrators, executors and assigns, whether of the whole or of a sectional interest therein, may make disclaimers of such parts of the thing patented as the disclaimant shall not claim to hold by virtue of the patent or assignment, stating therein the extent of his interest in such patent, which disclaimer shall be in writing, attested by one or more witnesses, and recorded in the patent office, on payment by the person disclaiming, in manner as other patent duties are required by law to be paid, of the sum of ten dollars. And such disclaimer shall thereafter be taken and considered as part of the original specification, to the extent of the interest which shall be possessed in the patent or right secured thereby, by the disclaimant, and by those claiming by or under him

[1] Act of 4th July, 1836, § 13.

subsequent to the record thereof. But no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing the same."

§ 168. The 9th section of the same act provides as follows: "(Any thing in the fifteenth section of the act to which this is additional to the contrary notwithstanding) that, whenever by mistake, accident, or inadvertence, and without any wilful default or intent to defraud or mislead the public, any patentee shall have in his specification claimed to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for so much of the invention or discovery as shall be truly and bona fide his own: *Provided*, it shall be a material and substantial part of the thing patented, and be definitely distinguishable from the other parts so claimed without right as aforesaid. And every such patentee, his executors, administrators and assigns, whether of a whole or a sectional interest therein, shall be entitled to maintain a suit at law or in equity on such patent for any infringement of such part of the invention or discovery as shall be bona fide his own as aforesaid, notwithstanding the specification may embrace more than he shall have any legal right to claim. But, in every such case in which a judgment or verdict shall be rendered for the plaintiff, he shall not be entitled to recover costs against the defendant, unless he shall have entered at the Patent Office prior to the commencement of the suit, a disclaimer of all that part of the thing patented which was so claimed without right: *Provided, however*, that no person bringing any such suit shall be entitled to the benefit of the provisions contained in this section, who shall have unreasonably neglected or delayed to enter at the Patent Office a disclaimer as aforesaid."

§ 169. The disclaimer mentioned in the seventh section has been held to apply solely to suits pending when the disclaimer was filed in the patent office; and that mentioned in the ninth section to suits brought after the disclaimer is so filed.[1]

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[1] Wyeth *v.* Stone, 1 Story's R. 273, 293. In this case, Mr. Justice Story thus expounded the statute: "We come, then, to the remaining point, whether, although under the Patent Act of 1793, ch. 55, the patent is absolutely void, because the claim includes an abstract principle, and is broader than the invention; or, whether that objection is cured by the disclaimer made by the patentee (Wyeth,) under the act of 1837, ch. 45. The seventh section of that Act provides, 'That whenever any patentee shall have, through inadvertence, accident, or mistake, made his specification too broad, claiming more than that, of which he was the original or first inventor, some material and substantial part of the thing patented being truly or justly his own, any such patentee, his administrators, executors, or assigns, whether of the whole or a sectional part thereof, may make disclaimer of such parts of the thing patented, as the disclaimant shall not claim to hold by virtue of the patent or assignment, &c., &c. And such disclaimer shall be thereafter taken and considered as a part of the original specification, to the extent of the interest, which shall be possessed in the patent or right secured thereby by the disclaimant, &c.' Then follows a proviso, that 'no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing the same.' The ninth section provides, 'That whenever, by mistake, accident, or inadvertence, and without any wilful default or intent to defraud or mislead the public, any patentee shall have, in his specification, claimed to be the first and original inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for so much of the invention or discovery, as shall be truly and *bonâ fide his own;* provided it shall be a material and substantial part of the thing patented, and shall be definitely distinguishable from the other parts so claimed without right as aforesaid.' Then follows a clause, that in every such case, if the plaintiff recovers in any suit, he shall not be entitled to costs, 'unless he shall have entered at the patent office, prior to the commencement of the suit, a disclaimer of all that part of the thing patented, which was so claimed without right;' with a proviso, 'That no person bringing any such suit shall be entitled to the benefits of the provisions contained in this section, who shall have unreasonably neglected or delayed to enter at the patent office a disclaimer as aforesaid.'

"Now, it seems to me, that upon the true construction of this statute, the disclaimer mentioned in the seventh section must be interpreted to apply solely to suits pending, when the disclaimer is filed in the patent office; and the disclaimer mentioned in the ninth section to apply solely to suits brought after the disclaimer is so filed. In this way, the provisions harmonize with each other; upon any other construction they would seem, to some extent, to clash with each other, so far as the legal effect and operation of the disclaimer is concerned.

"In the present case, the suit was brought on the first of January, 1840, and the disclaimer was not filed until the twenty-fourth of October, of the same year. The proviso, then, of the seventh section would seem to prevent the disclaimer from affecting the present suit in any manner whatsoever. The disclaimer, for another reason, is also utterly without effect in the present case; for it is not a joint disclaimer by the patentee and his assignee, Tudor, who are both plaintiffs in this suit; but by Wyeth alone. The disclaimer cannot, therefore, operate in favor of Tudor, without his having joined in it, in any suit, either at law, or in equity. The case, then, must stand upon the other clauses of the ninth section, independent of the disclaimer.

"This leads me to say, that I cannot but consider, that the claim made in the patent for the abstract principle or art of cutting ice by means of an apparatus worked by any other power than human, is a claim founded in inadvertence and mistake of the law, and without any wilful default or intent to defraud or mislead the public, within the proviso of the ninth section. That section, it appears to me, was intended to cover inadvertences and mistakes of the law, as well as inadvertences and mistakes of fact; and, therefore, without any disclaimer, the plaintiffs might avail themselves of this part of the section to the extent of maintaining the present suit for the other parts of the invention claimed, that is, for the saw and for the cutter and thereby protect themselves against any violation of their rights, unless there has been an unreasonable neglect or delay to file the disclaimer in the office. Still, however, it does not seem to me, that a court of equity ought to interfere to grant a perpetual injunction in a case of this sort, whatever might be the right and remedy at law, unless a disclaimer has been in fact filed at the patent office before the suit is brought. The granting of such an injunction is a matter resting in the sound discretion of the Court; and if the Court should grant a perpetual injunction before any disclaimer is filed, it may be, that the patentee may never afterwards, within a reasonable time, file any disclaimer, although the Act certainly contemplates the neglect or delay to do so to be a good defence both at law and in equity, in every suit, brought upon the patent, to secure the rights granted thereby. However, it is not indispensable in this case to dispose of this point, or of the question of unreasonable neglect or delay, as there is another objection,

which in my judgment is fatal, in every view, to the maintenance of the suit in its present form."

NOTE. — The following synopsis of the leading English cases on the subject of specifications may be found convenient to the reader, although they are cited in the foregoing chapter. The references are to the pages of Webster's Patent Cases; but the same cases may be found in other reports, by reference to the Index of Cases prefixed to this work.

The object of the specification is, that after the term has expired the public shall have the benefit of the invention. *Arkwright* v. *Nightingale*, Webster's Pat. Cas. 61.

The meaning of the specification is, that others may be taught to do that for which the patent is granted, and if any material part of the process be omitted, the specification is bad. *Liardet* v. *Johnson*, 53.

As the omitting to state the use of tallow, which the patentee employed for facilitating the manufacture of steel trusses. *Ibid.* 53.

Or, the omitting to state the use of a material, *aquafortis*, which the patentee used for obtaining the effect more rapidly. *Wood* v. *Zimmer*, 82.

Or, if the patentee employ cheaper articles than those specified.

Turner v. *Winter*, 81.

It is required as the price of the monopoly, that the patentee should enrol to the very best of his knowledge and judgment, the fullest and most sufficient description of the particulars on which the effect depended, that he was enabled to do.

Liardet v. *Johnson*, 54.

The most advantageous mode known to the inventor, and any circumstance conducive to the advantageous operation, must be stated.

Morgan v. *Seaward*, 175, 182.

The specification is intended to teach the public; it must fully disclose the secret, and contain nothing materially false or defective.

R. v. *Arkwright*, 66.

The specification must give the best mode known to the inventor, and must not mislead.

Walton v. *Bateman*, 622.

The specification ought to be so clearly worded as to enable any person of sufficient understanding on the particular subject, to attain the result without doubt or difficulty, it being the price paid by the inventor for keeping the public out of the manufacture. *Gibson* v. *Brand*, 629.

Some knowledge is requisite in the person reading the specification, which is addressed to artists of competent skill in the particular manufacture. *Bickford* v. *Skewes*, 219.

The specification addressed to persons of skill in the subject-matter and particular trade. *Arkwright* v. *Nightingale*, 61; *Elliott* v. *Aston*, 224.

The specification must be sufficient for persons skilled in the subject.

Huddart v. *Grimshaw*, 87.

The general test of sufficiency of the specification for mechanics or persons acquainted with the subject, limited by the condition, that they should be able to make the machine by following the directions of the specification, without any new inventions or additions of their own.

R. v. *Arkwright*, 66.

Any material alteration to be made in existing apparatus or machines must be stated. *Ibid.* 67.

As, with reference to the materials employed, or their form, or the speed of the parts, or their relative dimensions. *Ibid.* 67.

The representation and description of parts of no use, or without distin-

guishing to what purposes they are to be applied, or for the purpose of puzzling, will render the patent void, the specification not affording that fair, full, and true discovery, which the public have a right to demand in return for the monopoly. *Ibid.* 69.

If that which is shown will not do of itself, but requires something to be added, the specification is bad.

Ibid. 70.

If different parts are to move with different velocities, that must be stated. *Ibid.* 70.

If more parts be inserted than are necessary, as ten, where four are sufficient, the specification is void.

Ibid.

Information must not be requisite from other sources. *Ibid.*

As, where a workman has learned to make the machine from seeing others make it. *Ibid.*

The specification must be such as can be followed by a person possessing the ordinary knowledge, common to the trade, without invention or addition, or setting himself to solve a problem.

Morgan v. *Seaward*, 174.

Information acquired from other sources than the specification is to be excluded; but reasonable data must be given. *Ibid.* 179.

All extreme or exaggerated cases must be discarded, and the substance of the thing looked to. *Ibid.* 180.

It is not sufficient that a skilful person should be able to find it out; the invention must be effected by the directions contained in the specification. *Ibid.* 185.

The specification cannot be supported by the fresh invention and correction of a scientific period. To be valid, it must be such as, when fairly followed out by a competent workman, without invention or addition, the object of the patent may be obtained. *Neilson* v. *Harford*, 371.

By competent skill and knowledge are meant, ordinary skill and knowledge, such as that possessed by practical workmen; not the degree of skill which would enable a person on a mere hint to invent a machine for the purpose. *Ibid.* 314.

The specification being for the benefit of the trade must be sufficient for workmen competent to the ordinary business of that trade; first rate engineers and common laborers must be excluded. *The Household Company* v. *Neilson*, 692.

The compositions and proportions, where materials and quantity are of the essence of the invention, must be given. *Liardet* v. *Johnson*, 54, n.

As, in the case of a medicine or paint. *Ibid.* 54, n.

A specification which merely suggests something, so as to throw on the public the trouble of experiment, is bad. *Morgan* v. *Seaward*, 175.

A deviation from the precise dimensions shown so as to make different parts work together, is within the knowledge of any workman.

Ibid. 176.

The omission to give directions as to matters within the knowledge of a workman, who would, under ordinary circumstances be employed to carry out the invention, is no ground of invalidity.

Crossley v. *Beverley* 110, n. *n.*

The omission to mention in the specification anything which the patentee knows to be necessary for the beneficial enjoyment of his invention, is a fatal defect.

Neilson v. *Harford*, 317, 321.

But the omission to mention something which contributes only to the degree of the benefit, provided the apparatus described would work beneficially and be worth adopting, is not a fatal defect. *Ibid.* 317.

The omission to mention the use of water twyres will not invalidate the specification, it appearing that a beneficial effect could be produced without such apparatus, and that any person acquainted with smelting knows, that if the heat is increased, recourse must be had to some method of guarding the pipe, and that the water twyre was well known one mode for that purpose. *Ib.* 318.

If the apparatus described can be used beneficially in its simplest form, it is no objection that great improvements may have been made. *Ib.* 317.

Not necessary that the apparatus

described should produce the greatest amount of benefit.

The Household Co. v. *Neilson*, 695.

It is sufficient if persons acquainted with heating air would construct an apparatus productive of some benefit.

Ib. 694.

If experiments are necessary for the production of any beneficial effects, the patent is void.

Neilson v. *Harford*, 320.

As, if a particular temperature be essential and not stated. *Ib.* 318.

The specification need not describe that which is within the knowledge of any workman who would be employed to put up the apparatus.

Crossley v. *Beverley*, 110, n. *n*.

As, a condenser, in constructing a gas apparatus. *Ib.* 110, n. *n*.

A patentee is bound to insert in his specification the most improved means of carrying out his invention with which he is acquainted at the time of the enrolment of the specification. *Ib.* 116.

As, the different mechanical contrivances for carrying out the principle in respect of which he applied for his patent. *Ib.*

If it were otherwise, and if such contrivances must be the subject of fresh letters patent, the monopoly would be prolonged. *Ib.* 116

Time is allowed for the specification, in order that the invention may be brought to its greatest state of perfection. *Ib.* 117.

All improvements made during the interval for enrolling the specification should be described. *Ib.* 117.

The insertion or representation of anything as important, not being so in fact, will vitiate the specification.

Huddart v. *Grimshaw*, 93.

Letters patent are void if the specification be ambiguous, or give directions which tend to mislead the public. *Turner* v. *Winter*, 77.

As, where a generic term "fossil salt" is employed, but one species only, "sal gem," will succeed.

Ib. 80.

Or, where one of several articles named will not succeed. *Ib.* 81.

Where the specification directed the use of a subject, bituminous schistus, saying, the carbonization has nothing particular, only it is convenient before carbonization to separate the sulphates of iron which are mixed with it, and it appeared that all bituminous schistus had such sulphates, and that no easy means were generally known of removing them, and that without their removal the schistus could not be efficaciously used; the specification held insufficient. *Derosne* v. *Fairie*, 157.

If a substance as generally known contain foreign matter, the presence of which is positively injurious, the plaintiff must show that a method of easily removing such foreign matter is known. *Ib.* 162.

Aliter, if such foreign matter interfere to a limited extent only with the degree of benefit. *Ib.* 159.

The substance named must answer the purpose proposed beneficially.

Ib. 163, 164.

A specification must state at least one method which will succeed.

Ib. 165.

All the substances which will answer the purpose of the invention need not be stated, only the public must not be misled.

Bickford v. *Skewes*, 218.

But if a whole class of substances be stated as suitable, and any one of them will not answer, the specification is bad, as misleading the public.

Ib. 218.

The plainest and most easy way of production must be stated, and if obscure terms be employed for the sake of concealment, so as to induce the belief that elaborate processes are necessary, when the simplest will succeed, the specification is bad.

Savory v. *Price*, 83.

If a patentee states that he prefers a certain material, having ascertained that no other would answer, he misleads the public.

Crompton v. *Ibbotson*, 83.

If an article be described by a particular name, the patentee knowing that the requisite article cannot be ordinarily procured under the name by which it is described in the speci-

fication, and it be not stated where it may be procured, the public have not that full and precise information which they have a right to require.

Sturtz v. *De La Rue*, 83.

A studied or manifest ambiguity will vitiate.

Galloway v. *Bleaden*, 524.

It is no objection *primâ facie* to a specification, that it contains terms of art requiring explanation.

Derosne v. *Fairie*, 157.

A specification containing scientific terms which are not understood except by persons acquainted with the nature of the business, is not bad, because an ordinary person does not understand it, provided a scientific person does; but a specification using common language, and stating that by which a common man may be misled, though a scientific man would not, when it does not profess to use scientific terms, and an ordinary man is misled by it, would not be good.

Neilson v. *Harford*, 341.

If the invention be an improvement, it must distinctly appear on the face of the specification as such, and not as an original discovery.

Hill v. *Thompson*, 247.

The specification must inform the public what is new and what old.

MacFarland v. *Price*, 74.

A person is to be warned by the specification against the use of the particular invention. *Ib.*

A specification describing a machine as a whole is sufficient, though the invention be an improvement on a former patent.

Harman v. *Playne*, 75.

The specification is to warn the public of what is prohibited, and to teach them the invention.

Morgan v. *Seaward*, 173.

The specification must distinguish between what is new and old; if not, the presumption is, that the patent extends to the whole and to each part. *Carpenter* v. *Smith*, 532.

A mistake in a specification does not of necessity vitiate letters-patent, as, where air was called an imponderable substance, or sulphur a mineral, *Neilson* v. *Harford*, 340.

Semble, that a mistake in respect of a matter foreign to the invention, and which cannot mislead, will not vitiate the specification. *Ib.* 353.

The inaccurate use of words, if explained by the context, will not vitiate a specification. *Ib.* 369.

Semble, that the evidence of a person of ordinary skill cannot be allowed to contradict or correct the plain grammatical sense of one part of the specification. *Ib.* 329.

The sufficiency of the specification in matters of description is a question for the jury. *Walton* v. *Potter*, 595.

In the absence of evidence on the part of the defendants, that persons have been misled by the specification, it is sufficient for the plaintiff to call persons who say, that to them, it is clear. *Cornish* v. *Keene*, 502.

The attention of the plaintiff must be fully and clearly directed to the objection to the specification.

Bickford v. *Skewes*, 219.

The finding of the jury on an objection as to the distinctness of the specification is conclusive. *Ib.* 220.

NOTE. — I borrow from Mr. Godson's excellent work the following summary of the defects common in specifications, as they are treated in the English law. The specification is bad, when

1. The terms are *ambiguous*.
2. Necessary *descriptions are omitted*.
3. Parts claimed are *not original*.
4. Things are put in to *mislead*.
5. The *drawings* are incorrect.
6. *One of different ways*, or different ingredients named, fails.
7. *One of several effects specified* is not produced.
8. The things described are *not the best known* to the patentee.

If the *terms* in which the description of the subject is expressed be *ambiguous*, if the words are used in any other sense than that in which they are generally understood, the invention may be wholly or partially concealed; and, therefore, on that account, the grant would be invalid.

Taking the title, patent and specification of *Campion's* letters patent[1] together, it was very difficult to say whether the word "whatever" referred to the total exclusion of starch, or whether when combined with the words "without any starch," it was merely a description of the thread of the sail-cloth which had been improved. For that ambiguity the patent was declared to be void.

It is mentioned in *Turner's* specification,[2] "take any quantity of lead, and calcine it; or minium or red lead," whence it was inferred that the lead only was to be calcined, and a doubt arose whether the minium or the red lead was to be calcined. Such an objection, if the only one, would probably not invalidate a grant, though a similar ambiguity is carefully to be guarded against. In that case, however, calcination would not produce the effect; fusion was necessary.

It was objected to the same patent, that the substance intended to be produced, and *called* white lead, could only be applied to a few of the purposes of white lead. The answer that it was not intended to make white lead was not sufficient. In the specification, the inventor should have stated that the effect produced a substance *similar* to white lead, and then have set forth the useful purposes to which this new substance might be converted; and ought not to have misapplied the *term* white lead.

There was also another word in that specification which was not intelligible. It was directed that *fossil* salt should be used. Now, fossil salt is a genus having many species, and only one of the latter, *sal gem*, would answer the intended purpose. For those reasons the patent was declared to be void.

If a term have a *technical* meaning, or one differing in the usage of trade from the ordinary sense annexed to it, the word may be received in its perverted sense; and if the manufacture be otherwise intelligibly described, a mere verbal inaccuracy will not vitiate the patent;[3] but if a word be not used in its common acceptation, then it should be explained. Thus, in *Wheeler's* specification,[4] it appeared, that by the word "malt," the patentee meant barley fully prepared for making beer; but that the word "malt," in its common acceptation, is applied to the grain as soon as it has germinated by the effect of moisture, and before it has been dried; and it was held that he ought to have explained his meaning.

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[1] Campion *v.* Benyon, 3 B. & B. 5.
[2] Turner *v.* Winter, 1 T. R. 602.
[3] 2 Hen. Bla. 485.
[4] King *v.* Wheeler, 2 Barn. & Ald. 349.

In another case,[1] one of the ingredients was a white substance imported from Germany, and which could be purchased at one or two color shops in London.

The only description or denomination given to it in the specification was, "The purest and finest chemical white lead;" but there was no article known by that denomination in the trade, or in the shops where white lead is usually sold, and the finest white lead that could be obtained would not answer the purpose. The specification was held to be insufficient.

If, in a manufacture, something well known be used, and the inventor give a design of it, which appears to be of a different thing, though he means that the thing known should be used, the specification is in terms ambiguous; and it will be considered as being worded with an endeavor to conceal the invention and deceive the public. Thus, Mr. Arkwright, although he used the old spiral cylinder in his machine, so managed the drawing and description, that on the face of the specification it appeared that he intended to use a parallel cylinder.[2]

The several distinct parts of the subject of a patent may be divided into the *new* and the *old*. In a specification, all that is new must of course be clearly elucidated. The old parts may be distinguished as they are *material* and *immaterial* in producing the desired effect. Any particular thing, although in common use, when it is applied in a new manner to the production of a new effect, is material, and becomes a part of the substance of the invention, and must be described. And if it is not mentioned, and its use pointed out, the description will be defective. It is only the *well-known and immaterial* old parts that need not be described.[3]

A material alteration, from rollers in general, had been made in the rollers of Arkwright's machine, of which no description was given, and it was considered as wilfully concealed.[4] Mr. Arkwright's machine was intended to prepare for spinning, not only cotton, but silk, flax, and wool; yet he described all the parts of it as one entire instrument. He did not state, as he should have done, that the hammer in the front of it was *only* to be used in preparing flax.[5] Other parts, which were put on or off as occasion required, appeared as though they were fixed, and to be used in every stage of manufacturing each of the articles.[6] Those omissions in the description were considered of sufficient importance to invalidate the patent.

Every part of the invention which is new must be accurately described, as

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[1] Sturz *v.* De La Rue and others, 5 Russell's Rep. 322.

[2] Printed Case, 175; Dav. Pat. Cas. 113. Gods. on Pat. 54.

[3] Hill *v.* Thompson, 2 B. Moore, 450, 455, &c.

[4] Printed Case, 173; Dav. Pat. Cas. 107.

[5] King *v.* Arkwright, Printed Case, 175; Dav. Pat. Cas. 117.

[6] King *v.* Arkwright, Printed Case, 173; Dav. Pat. Cas. 109.

to the manner in which it is to operate. In the case of *Felton* v. *Greaves*,[1] the patent was granted for a machine for an expeditious and correct mode of giving a fine edge to knives, razors, *scissors*, and other cutting instruments. The machine described in the specification consisted of two circular rollers of steel made *rough*, like files, and the instrument to be sharpened was passed backward and forward in an angle formed by their intersection. It appeared in evidence that if the machine was intended to give a fine edge to *scissors*, that the one roller should be smooth.

In the specification it was also stated that *other materials* besides steel *might* be employed, and it appeared that if Turkey stones, instead of steel, were used for both the rollers, it was possible to succeed with scissors. The Lord Chief Justice observed: "The specification describes both the rollers as files. It is not stated either that the rollers must be one rough and the other smooth, or that Turkey stones must be substituted for the files, when it is intended to sharpen the edges of scissors. The specification is insufficient."

There are persons who imagine that if they introduce the words "and for other useful purposes" into the title of the patent, that the title must be good; and that if they insert the words "other materials may be used," or "any other substance from which the thing can be obtained," into the description, that it is impossible to find fault with the specification. There is not a greater error. In the last case it appeared that the words "other materials," did not assist the description or save the specification.

In addition to the old authorities, another case[2] has been decided, by which it appears that the words "any other substance" had been nearly fatal to an important patent. In the introductory part of the specification, Clegg, the original patentee, used these words: "My improved gas-apparatus is for the purpose of extracting inflammable gas by heat from pit-coals, tar, *or any other substance* from which gas or gases, capable of being employed for illumination, can be extracted by heat;" and then he went on to mention the other inventions. In the description of the retort, he called it "a horizontal flat retort, in which coal, or other materials capable of producing inflammable gas, are heated, and the gas extracted by distillation;" and in the course of it he spoke of the "coal or other substance" being "spread in a thin layer." Throughout the description of the retort, and the explanation of the drawings, he always spoke of "coal," or "coal or coke," or "coal or other substance" only.

It appeared that the retort was incapable of obtaining gas, except very imperfectly, or by considerable modifications, *from oil*. The date of the patent was December 9, 1815, that of the specification, June 8, 1816. At

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[1] 3 Car. & Payne's Rep. 611.

[2] Crossley *v.* Beverley, 1 Mood. & Malk. 283; and see 3 Car. & Payne, 513.

these periods it was known, as a philosophical fact, that gas was producible from oil; but it had not been proposed to manufacture such gas for purposes of illumination. Some speculations, indeed, were then going on, and a patent was obtained about the same time for making it; and the manufacture was subsequently brought into use, though not very generally.

The counsel for the defendant submitted that the unfitness of the retort for making gas from oil was fatal to the patent, and contended that it was the duty of the patentee not to overstate the limits within which his invention would be useful, that no person may be led to unavailing expense in trying it upon purposes for which it is unfit.

Lord Tenterden said: "I must look at the whole of the specification together; and doing so, I think it is evident that it only represents the retort as suited to materials of the same kind as coal. I am of opinion, also, that I ought to understand the "other substances" mentioned to signify *substances then known* to be available for the purpose of illuminating with gas, not everything which will burn with a flame; for all these, in a certain sense, will produce gas. It is clear, on the evidence, that oil was not then generally considered as such a substance; and the fact, that some speculations were going on at the time with respect to its being so, will make no difference. The patentee cannot be required to foresee the success of these speculations, if they have succeeded; but I must consider him, as a practical man, to have spoken of things which practical men then treated as usable for the purpose specified.

On both grounds, therefore, I must decide against the objection. The law is severe enough in breaking up patents altogether for a fault in any part of them, without straining it in favor of such an objection.

This position of law was further illustrated in the case of *Crompton* v. *Ibbotson*.[1] The patent was for an improved method of drying and finishing paper. The specification contained these words: "the invention consists in conducting paper by means of a cloth or cloths against a heated cylinder; which cloth may be made *of any suitable material*, but *I prefer* it to be made of linen warp and woolen weft; which cloth is shown in the drawing by blue lines."

It appeared by the evidence of the plaintiff's witness, that, as to the conducting medium, he had tried several things, but he was not aware of anything that would answer the purpose except the material which the patentee said he preferred. Whereupon Mr. Justice Bayley directed a nonsuit. A motion was made to set aside that nonsuit. It was refused, and Lord Tenterden said, the patent was obtained for the discovery of a proper conducting medium. The plaintiff found, after repeated trials, that nothing would serve

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[1] Danson & Lloyd's Rep. 33.

the purpose except the cloth described in the specification; yet he says the cloth may be made "of any suitable material," and merely that he prefers the particular kind there mentioned. Other persons, misled by the terms of this specification, may be induced to make experiments which the patentee knows might fail, and the public has not the full and entire benefit of the invention; the only ground on which the patent is obtained. But this rule must not be extended to the rudiments of a science, nor to the mere incidents of a subject. If gold were directed to be used in a state of fusion, the manner and *utensils* for putting it in that state need not be mentioned.[1]

That the new parts of the subject may be more clearly seen and easily known, the patentee must not only claim neither more nor less than his own invention, but he must *not appear* even unintentionally to appropriate to himself any part which is old, or has been used in other manufactures.[2] Those parts that are old and immaterial, or are not of the essence of the invention, should either not be mentioned, or should be named only to be designated as old. The patentee is not required to say that a screw or a bobbin, or anything in common use is not part of his discovery; yet he must not adopt the invention of another person, however insignificant it may appear to be, with-

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[1] Turner *v.* Winter, 1 T. R. 602. Gods. on Pat. 120.

[2] Huddart *v.* Grimshaw, Dav. Pat. Cas. 295. Ellenborough, C. J.: As to the bobbins they are not worth mentioning; the springs and tube are the things in which it should seem the principal originality of the invention consists. It is contended that the springs are not an essential part of the invention; if they are enrolled as an essential part, whether they are so or not, it would certainly go to destroy this patent, because no deceptive things are to be held out to the public; those that are material are to be held out as material; according to the evidence of Mr. Rennie, they are material. It appears to me that the springs in Belfour and Huddart's machine both produce the same end to regulate the tension. Now, if it is a spring to regulate the tension of the yarn, which is essential to be regulated, it does seem to me; but it is for your judgment to say whether it is a material part of the invention, and relied upon as such, as it should seem it is by both; and if it is the same, then that which has been communicated by Mr. Belfour Mr. Huddart cannot take the benefit of.

It is for you to say, for that is the substance of the case, as to the invention of the patent, *whether any essential part of it was disclosed to the public before.* If you think the same effect in substance is produced, and that the springs in Mr. Belfour's by producing tension, obtains a material end in the making of ropes in this way proposed, and that it is in substance the same as in the other, this patent certainly must, upon principles of law, fall to the ground. If you think it is not the same, or if you think it is not material, though we have had the evidence of Mr. Rennie upon its materiality; if you think this patent has been for a new invention, carried into effect by methods new and not too large beyond the actual invention of the party, in that case the patent may be sustained. But if you think otherwise in point of law or expediency, the patent cannot be sustained.

The verdict was for the plaintiff with nominal damages; but it is evidently at variance with the opinion of Lord Ellenborough.

out a remark. If any parts are described as essential without a protest against any novelty being attached to them, it will seem, though they are old, that they are claimed as new.[1] The construction will be against the patentee that he seeks to monopolize more than he has invented, or that, by dwelling in his description on things that are immaterial or known, he endeavors to deceive the public, who are not to be deterred from using anything that is old by its appearing in the specification as newly invented. They are to be warned against infringing on the rights of the patentee, but are not to be deprived of a manufacture which they before possessed.[2] It seems, therefore, to be the safest way in the specification to describe the whole subject, and then to point out all the parts which are old and well known.

In the case of *Campion* v. *Benyon*,[3] it appeared that the patent was taken out "for an improved method of making sail-cloth, without any starch *whatever*." The improvement or discovery consisted in a new mode of texture, and not in the exclusion of starch; and the advantage of excluding that substance had been discovered and made public before that time. The court held that the patent was void, as claiming, in addition to what the patentee had discovered, the invention of something already made public. Mr. Justice Park observed; "In the patentee's process, he tells us that the necessity of using starch is superseded, and mildew thereby entirely prevented; but if he meant to claim as his own an improved method of texture or twisting the thread to be applied to the making of unstarched cloth, he might have guarded himself against ambiguity *by disclaiming* as his own discovery, the advantage of excluding starch."

Upon the same principles of reasoning, but certainly with much more force, if there be several things specified that may be produced, and *one* of them is *not new*, the whole patent is void. This point underwent a very full discussion in the case of *Brunton* v. *Hawkes*.[4]

If things useless and unnecessary have been mixed with a substance, or attached to a machine, though the *terms* are intelligible, and every necessary description has been introduced, and the *parts claimed* are only those which have been newly invented, the patent is void. Of this nature, are those parts that have *never been used* by the patentee. It is from that circumstance inferred, that they have been introduced to overload the subject, and by clouding the description, to mislead the public, and conceal the real invention. Thus, in Arkwright's machine, the introduction of several things,[5]

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[1] Boville *v.* Moore, Dav. Pat. Cas. 404; and see Manton *v.* Parker, Dav. Pat. Cas. 329.

[2] Dav. Pat. Cas. 279, and 3 Mcriv. 629.

[3] 3 B. & B. 5.

[4] 4 Barn. & Ald. 550.

[5] Godson on Pat. p. 29, n.; and see Printed Case, 182, 186, 187; and see Dav. Pat. Cas. 129, 139, 140; also Hill *v.* Thompson, 2 B. Moore, 450.

which were never used by him, was considered as done merely to mislead the public.

If any considerable part of a manufacture be *unnecessary* to produce the desired effect, it will be presumed that it was inserted only with a view to perplex and embarrass the inquirer. In the specification to Turner's patent[1] for producing a yellow color, among other things, minium is directed to be used, which it appeared would not produce the desired effect. In the same case, among a great number of salts which were specified, it was left to the public to use those they pleased, without either of them in particular being pointed out, and only one would answer the intended purpose. For either of these reasons, the validity of a patent could be impeached.

This rule, that if any considerable part of the things described in the specification be unnecessary, it will be presumed that it was inserted only with a view to perplex and embarrass the inquirer, was confirmed by the case of *Savory* v. *Price*.[2]

That patent had been granted for a method of making a neutral salt or powder, possessing all the properties of the medicinal spring at Seidlitz, under the name of "Seidlitz Powder." The specification enrolled within the time required by the patent, *set out three distinct recipes*, and described the modes and proportions in which the results were to be mixed, in order to produce the "Seidlitz Powder." It was proved that the three products so mixed answered the purpose professed in the patent, and that *the combination was new* and useful. But upon cross-examination of the plaintiff's witnesses, the following facts were established. The recipe No. 1, produced the substance called "Rochelle Salts." Rochelle salts were known to the world before 1815 under that name, and also as Soda Tartarizata.

Recipe No. 2, produced "Carbonate of Soda," which was known before 1815, and was in the Pharmacopœia of 1809; and a more expensive, but more perfect way of making it was also known, and it might be bought in shops.

The recipe No. 3, produced "Tartaric Acid," the method of making which was known at the time of the patent, and under that or some other name, it might be bought in chemists' shops; and other methods of making it were known, all of which would be equally efficacious for the combination of Seidlitz Powders. Rochelle salts, carbonate of soda, and tartaric acid *mixed in the manner prescribed*, produced the Seidlitz Powders.

The Chief Justice said, "It is the duty of any one, to whom a patent is granted, to point out in his specification the plainest and most easy way of producing that for which he claims a monopoly; and to make the public acquainted with the mode which he himself adopts. If a person, on reading

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[1] Turner *v.* Winter, 1 T. R. 602; Godson on Pat. 120.

[2] Ryan & Moody, 1.

the specification, would be led to suppose a laborious process necessary to the production of any one of the ingredients, when, in fact, he might go to a chemist's shop and buy the same thing as a separate simple part of the compound, the public are misled. If the results of the recipes, or of any one of them, may be bought in shops, this specification, tending to make people believe an elaborate process essential to the invention, cannot be supported."

Although the unnecessary part had *occasionally* been used, it would still be a question whether it had not been put there to mislead the public. But this rule is not so strictly enforced that a person is compelled to *go on using* every part of his invention to secure and continue his patent right. If any particular parts have been once fairly introduced, and not laid aside, until, by some discovery or contrivance made subsequent to the date of the patent, they were found to be unnecessary, the patentee may, without prejudice, leave them out; or cease to make use of them. But the presumption is against the inventor, until he give a good reason for the discontinuance.[1]

Watts, in his specification, gave a description of several things, which being incomplete, would not have supported a patent; and yet, inasmuch as he did not claim them as part of the subject of his patent, it was considered that they were *matters of intention only*, and that the specification was not rendered less intelligible by the introduction of them.[2]

It is absolutely necessary to annex to the specification a model, diagram, picture, or drawing, descriptive of the manufacture.[3] If without it the subject is clearly described, it is better omitted. It is, however, an easy way of illustrating the parts of a machine, and, therefore, has generally been adopted. It was formerly said, that in every instance in which a drawing was introduced, it was indispensable that it should be drawn on a *scale*, &c.;[4] that in it the diameters of wheels, the length of levers, &c., every proportion and relation of the parts, ought to appear in due ratio to each other; and that the whole should be capable of being put together without leaving the length, breadth, or relative velocity, of any of the parts to be found out by conjecture and experiments, or the patent would be void. Arkwright's machine,[5] though shown in a perspective drawing, could not be made for want of a scale to determine its dimensions.

This rule has of late been modified. If a common mechanic can make the subject of the patent from the drawing in perspective, it is not necessary that there should be a scale. It was also formerly considered that the words

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[1] Boville *v.* Moore, Dav. Pat. Cas. 399.

[2] Boulton *v.* Bull, 2 Hen. Bla. 480; Dav. Pat. Cas. 187, 188.

[3] 2 Hen. Bla. 479; Dav. Pat. Cas. 187; and see Ex parte Fox, 1 Ves. & Beam. 67

[4] Harman *v.* Playne, 11 East 112; 14 Ves. 130, S. C.

[5] King *v.* Arkwright, Printed Cas. 176. Dav. Pat. Cas. 114.

of the specification ought of themselves to be sufficiently descriptive of the improvement; that the specification ought to contain within itself all the necessary information, without the necessity of having recourse to a diagram, and that, if a diagram were given, it ought to be taken merely as an illustration, and not as constituting a principal or essential part of the specification; and, therefore, that a person was not bound to look at the diagram to learn the invention. But a very learned judge has, however, held, that if a drawing or figure enable a workman of ordinary skill to construct the improvement, it is as good as any written description.[1]

On the trial at nisi prius, it was objected in the case of *Bloxam* v. *Elsee*,[2] that the specification was bad, because there were several words in it not in English; such as *vice depression*, *vice repulsion*, and *vice de re-action*, for different screws; and the French word *chapitre*, for a cap, also occurred. It was, however, proved, that, from the drawings annexed to this specification, a skilful mechanic might make the machine; but it was contended that, as a specification could not be made by drawings alone, it must be made in apt words, intelligible to mechanics; and if this specification were held good, everything mentioned in a specification might be called by a wrong name, and drawings referred to for the whole. Even the scale appended to the drawings was a scale of *pieds* and *pouces*, terms unknown to English mechanics.

The Lord Chief Justice observed, "It was proved that the names to the scale were quite immaterial; for relative proportion, which was all that was wanted, the scale would have been as good if there had been no names at all. An inventor of a machine is not tied down to make such a specification as, by words only, would enable a skilful mechanic to make the machine, but he is to be allowed to call in aid the drawings which he annexes to the specification; and if, by a comparison of the words and the drawings, the one would explain the other sufficiently to enable a skilful mechanic to perform the work, such a specification is sufficient."

The consequences which attend the introduction of anything into the specification, merely to misguide the public, have been mentioned. The means must be adapted to the end.[3] The description must not give *several ways* and methods which may or may not answer, according to the skill exercised in the attempt to produce the manufacture. Thus, in the specification of Winter's patent,[4] a great number of salts were mentioned, by which it appeared that the public might take either of them to make the subjects of

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[1] Brunton *v.* Hawkes, 37 Vol. Rep. of Arts, N. S. p. 105; and see S. C. 4 Barn. & Ald. 541; 1 Stark N. P. C. 201, and *Post*.

[2] 1 Car. & P. 558.

[3] Dav. Pat. Cas. 331. And see Manton *v.* Parker, Dav. Pat. Cas. 328. 2 B. Moore, 457, 458.

[4] Turner *v.* Winter, 1 T. R. 602.

the patent. There was only one of them that would produce the effect, and therefore, his patent was void. Even if there be only one thing which will not answer the intended purpose, the specification is incorrect.

In *Derosne* v. *Fairie*,[1] the specification stated a method of depriving syrups of every description, of color, by filtering them through charcoal, produced by the distillation of bituminous schistus, and used alone or mixed with animal charcoal, or even through animal charcoal alone when placed in thick beds. It appeared that iron was combined with the *bituminous schistus* found in this country, and it was doubtful whether the charcoal distilled from the schistus was not only disadvantageous but injurious to the matter going through the process. The charcoal sworn to have answered the purpose of the patent, was received from Derosne at Paris, where it had been made, and was declared by him to be the residuum of bituminous schistus, from which the iron had been extracted. But no means existed of ascertaining in this country, of what substance it actually was the residuum, nor did the specification mention any process for extracting the iron from bituminous schistus. The court held, that whether the latter omission avoided the patent or not, the patentee ought to prove, either that the presence of iron in the bituminous schistus used in the process of filtering, was not absolutely disadvantageous to the matter going through that process, or that the method of extracting the iron from it was so simple and known, that a person practically acquainted with the subject could accomplish it with ease, or that bituminous schistus, as known in England, could be used in this process with advantage; and a verdict having been found for the plaintiff, the court set it aside on terms, and granted a new trial.[2]

Not only must there not be any unnecessary *means* mentioned in the specification, but *effects* that cannot accurately be produced must not be mentioned and described. The patentee should inform the inquirer of the *exact* nature of the manufacture invented. If the article described have not the qualities, or the machine produce not the results which are set forth in the specification, the grant is invalid.[3]

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[1] Derosne *v.* Fairie and others, 5 Tyr. Rep. 393.

[2] There was not any further litigation, but the patentee disclaimed the use of bituminous schistus.

[3] See Haworth *v.* Hardcastle, 1 Bing. N. C. 1822.

Tindal, C. J. "The motion for entering a nonsuit was grounded on two points. First, that the jury had, by their special finding, negatived the usefulness of the invention to the full extent of what the patent and specification had held out to the public. Secondly, that the patentee had claimed in his specification, the invention of the rails of staves over which the cloths were hung, or, at all events, the placing them in a tier at the upper part of the drying room."

As to the finding of the jury, it was in these words: "The jury find the invention is new, and useful upon the whole, and that the specification is sufficient for a mechanic, properly instructed, to make a machine; and that there has been an infringement of

Such is the law too, if the patentee take his grant for the invention of several things, and he fail in *any one* of them. By Winter's invention [1] three things were to be produced: one reason for its being considered void was, that the second article, which was called in the patent "white lead," was in fact, quite a different substance, and which could be used only for a very few of the purposes for which common white lead is applied. Bainbridge's patent [2] for the improvement of the hautboy was for *new notes*, in the plural number. On proof, it appeared that he had only found out *one* new note, and he consequently failed in an action of damages for an infringement of the grant, although great ingenuity had been exerted, and the fingering was rendered less complicated by the invention.

In the case of *Lewis* v. *Marling*,[3] a most important point was settled. A patent was granted for improvements on shearing machines, for shearing or cropping woolen and other cloths. The patentees in their specification claimed, (amongst other things) "the application of a proper substance fixed on or in the cylinder *to brush* the surface of the cloth to be shorn." The brush for the surface of the cloth was soon found to be useless, and the patentees never sold any machines with it.

The Court decided that if the patent be granted for several things, one of

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the patent; but they also find that the machine is not useful in some cases for taking up goods."

The specification must be admitted, as it appears to us, to describe the invention to be adapted to perform the operation of removing the calicoes and other cloths from off the rails or staves, after they have been sufficiently dried. But we think we are not warranted in drawing so strict a conclusion from this finding of the jury, so as to hold that they have intended to negative, or that they have thereby negatived, that the machine was not useful, in the generality of the cases which occur for that purpose. After stating that the machine was useful on the whole, the expression that in some cases, it is not useful to take up the cloths, appears to us, to lead rather to the inference, that, in the generality of cases, it is found useful. And if the jury think it useful in the general, because some cases occur in which it does not answer, we think it would be much too strong a conclusion to hold the patent void. How many cases occur, what proportion they bear to those in which the machine is useful, whether the instances in which it is found not to answer are to be referred to the species of cloth which are hung out, to the mode of dressing the cloths, to the thickness of them, or to any other cause distinct and different from the defective structure, or want of power in the machine, this finding of the jury gives us no information whatever. Upon such a finding, therefore, in a case where the jury have given their general verdict for the plaintiff, we think that we should act with great hazard and precipitation if we were to hold that the plaintiff ought to be nonsuited, upon the ground that his machine was altogether useless for one of the purposes described in his specification.

[1] Turner *v.* Winter, 1 T. R. 602.

[2] Bainbridge *v.* Wigley, K. B. Dec. 1810; and see Brunton *v.* Hawkes, 4 Barn. & Ald. 451.

[3] 10 Barn. & Cress. 22.

which is supposed (at the time of enrolling the specification,) to be useful, but is afterwards found not to be so, yet the grant is good in law. The opinions of the judges are very excellent.

Lord Tenterden observed, "As to the objection on the ground that the application of a brush was claimed as a part of the invention, adverting to the specification, it does not appear that the patentee says the brush is an essential part of the machine, although he claims it as an invention. When the plaintiffs applied for the patent, they had made a machine to which the brush was affixed, but before any machine was made for sale, they discovered it to be unnecessary. I agree, that if the patentee mentions that as an essential ingredient in the patent article, which is not so, nor even useful, and whereby he misleads the public, his patent may be void; but it would be very hard to say that this patent should be void, because the plaintiffs claim to be the inventors of a certain part of the machine not described as essential, and which turns out not to be useful. Several of the cases already decided have borne hardly on patentees, but no case has hitherto gone the length of deciding that such a claim renders a patent void, nor am I disposed to make such a precedent."

Mr. Justice Bayley said, "I am of the same opinion. To support a patent, it is necessary that the specification should make a full and fair disclosure to the public of all that is known to the patentee respecting his invention. If it does not, the consideration on which he obtains his patent fails. If he represents several things as competent to produce a specific effect, when only one will answer, that is bad; or if he suppresses anything which he knows will answer, that also is bad. But it is objected here, that the plaintiffs described the application of the brush as parcel of their discovery. At the time when the patent was obtained, a brush was used, and there is no reason to doubt that the plaintiffs at that time thought it necessary."

Mr. Justice Parke. "The objection to the patent as explained by the specification may be thus stated; the patent is for several things, one of which, being supposed to be useful is now found not to be so; but there is no case deciding that a patent is on that ground void, although cases have gone the length of deciding, that if a patent be granted for three things, and one of them is not new, it fails *in toto*. The prerogative of the crown as to granting patents, was restrained by the statute, 21 Jac. 1, c. 3, § 6, to cases of grants, 'to the true and first inventors of manufactures, which others at the time of granting the patent shall not use.' The condition, therefore, is, that the thing shall be new, not that it shall be useful; and although the question of its utility has been sometimes left to a jury, I think the condition imposed by the statute has been complied with, when it has been proved to be new."

Although the description may be otherwise complete and correct, although the means may be adapted to the end, and the things specified be produced;

yet, if the subject be not given to the public in the best and *most improved state* known to the inventor, the patent is void. If, at the time of obtaining the grant, he was acquainted with a mode of making his manufacture more beneficial than by the one specified, the concealment will be considered fraudulent. Thus, Lord Mansfield held a patent for "steel trusses" to be void, because the inventor had omitted to mention that in tempering the steel, he rubbed it with tallow, which was of some use in the operation.[1]

In the specification for a patent for making verdigris,[2] aqua fortis, which was used by the inventor, was not mentioned. It appeared that the patentee mixed the aqua fortis, with great secrecy, which raised the presumption that he knew of its value when the grant was sealed. The patent was, therefore, declared to be void.

Nor can any *alteration*, known to the inventor before he procures the patent, be made, however insignificant it may be, even if it were nothing more than the means of working the machine a little more expeditiously, without raising a presumption that the patentee fraudulently concealed the best method. A lace machine,[3] for which Mr. Boville had obtained a patent was worked with greater expedition *by bending together* two teeth of the dividers, or by making one longer than the others, than if it were used as

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[1] Liardet *v.* Johnson, Bull. N. P. 76; and see 1 T. R. 608.

[2] *Wood and Others* v. *Zimmer and Others*, 1 Holt, 58. Gibbs, C. J. It is said that this patent makes verdigris, and is, therefore, sufficient. The law is not so. A man who applies for a patent, and possesses a mode of carrying on that invention in the most beneficial manner, must disclose the means of producing it in equal perfection, and with as little expense and labor as it costs the inventor himself.

The price that he pays for his patent is, that he will enable the public, at the expiration of his privilege, to make it in the same way, and with the same advantages. If anything which gives an advantageous operation to the thing invented be concealed, the specification is void. Now, though the specification should enable a person to make verdigris substantially as good without aqua fortis, as with it; still, inasmuch as it would be made with more labor by the omission of aqua fortis, it is a prejudicial concealment, and a breach of the terms which the patentee makes with the public.

[3] *Boville* v. *Moore*, Dav. Pat. Cas. 400. Gibbs, C. J. There is another consideration respecting the specification, which is also a material one; and that is, whether the patentee has given a full specification of his invention; not only one that will enable a workman to construct a machine answerable to the patent, to the extent most beneficial within knowledge of the patentee at the time; for a patentee, who has invented a machine useful to the public, and can construct it in one way more extensive in its benefit than in another, and states in his specification only that mode which would be least beneficial, reserving to himself the more beneficial mode of practising it, although he will have so far answered the patent as to describe in his specification a machine to which the patent extends; yet he will not have satisfied the law, by communicating to the public the most beneficial mode he was then possessed of for exercising the privilege granted to him. And see *Brown* v. *Moore*, Rep. of Arts, 28th vol. p. 60.

specified. This mode of using it was known to the inventor before he obtained the patent; and, therefore, Gibbs, C. J. thought that the patent was bad on that account.

If the patentee use *cheaper materials* in making the manufacture than those he has enumerated, his grant will not be sustained by his proving that the articles specified will answer the purpose as well.[1]

It signifies not in what manner this advantage accrues to the patentee; it is not necessary that any palpable alteration has taken place; that something has been added or something taken away from the invention as specified, to render the patent void; it will be invalid, if *by any means* whatever a benefit is derived by the patentee, which was concealed from the public at the time the patent was obtained, even if it be merely a small part of a machine on which a particular motion is impressed at a given moment in a particular direction.[2]

If this improved manner of using the invention be *unintentionally* left undescribed, still the patent is void. "If it was inadvertent," says Gibbs, C. J., speaking of Boville's omission in not describing the bending of the teeth, "if he actually knew and meant to practise that mode, and inadvertently did not state the whole in his specification, he must answer for his inadvertence."[3]

But if it appear that this better mode of using the manufacture be a *subsequent discovery*; that the patentee has since the date of the grant found out this new means of carrying on his own invention to a better effect; then the grant will continue valid;[4] but, as before stated, the presumption of concealment will be against him.

Another important rule of law was established in the case of *Crossley* v. *Beverley*.[5] Mr. Clegg, the patentee, had a grant for an improved gas appa-

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[1] 1 T. R. 607; 1 Holt's N. P. C. 60; *King* v. *Wheeler*, 2 Barn. & Ald. 345.

[2] *King* v. *Arkwright*, Printed Cases, 50. The cylinder in the specification was a parallel one; but that which was used, spiral.

[3] *Boville* v. *Moore*, Dav. Pat. Cas. 413. Gibbs, C. J., observed to the jury, You will say whether you think there is any fraudulent concealment in the specification. A juryman: It might be inadvertent, and not fraudulent. Gibbs, C. J.: Certainly; and if it were inadvertent; if he actually knew and meant to practise that mode, and inadvertently did not state the whole in his specification, he must answer for his inadvertence; but it might be a subsequent discovery. Verdict for the defendant.

[4] *Boville* v. *Moore*, Dav. Pat. Cas. 401. Gibbs, C. J.: If Mr. Brown, since he obtained his patent, had discovered an improvement, effected by bending the teeth or adding a longer tooth, he might apply that improvement; and his patent will not be affected by his using his own machine in that improved state; but if, at the time he obtained his patent, he was apprized of this more beneficial mode of working, and did not by his specification communicate it to the public, that must be considered as a fraudulent concealment, although it was done inadvertently, and will render the patent void.

[5] 9 Barn. & Cress. 63.

ratus, and he claimed a gas meter (or part of it) as described in the specification. It appeared, on the examination of Mr. Clegg himself, that he had invented the method of making the gas meter, as described in the specification, in the time *between the dates of the patent and the specification*. Before he took out the patent he had completed the design of the meter, but he had not actually made one, and he found several improvements upon it before he sent in his specification, in which he described the meter so improved as the invention claimed by him. The court was clearly of opinion the patent was valid in law, and Lord Tenterden observed that he was at a loss to know upon and for what reason a patentee is allowed time to disclose his invention, unless it be for the purpose of enabling him to bring it to perfection. If, added his lordship, in the intermediate time another person were to discover the improvements for so much of the machine, the patent would not be available. But Mr. Justice Bayley said, "It is *the duty* of a person taking out a patent to communicate to the public any improvement that he may make upon his invention before the specification has been enrolled."

Upon these grounds and for these reasons, applicable to the specifications of almost all kinds of manufactures, many patents have been declared to be void. The inventor bearing them in mind, and attending to the nature of each kind of manufacture, whether it be a substance or machine, &c., as it is distinguished from the rest in the last chapter, will be able, by avoiding similar errors, to make a correct specification for any invention. Indeed, no further assistance can be given to him than that which may be derived from a few general observations on the description peculiar to each manufacture.

The *description of a machine* must disclose the nature of the invention, and the manner in which it is to be performed. It must be minute without perplexity, and luminous without being overwrought. When it descends to particulars, the elements that are known to all should not be noticed; nor yet, in its fulness, should anything be included that is not necessary to render it intelligible. It should be such that a common mechanic, with a reasonable degree of skill upon the subject, may comprehend it. Though it need not be so full as to instruct a person ignorant of the first principles of mechanics in the method of its formation and use; yet, on the other hand, a person eminently skilled in the subject must not be required to make it. A reasonable knowledge and skill (of which the jury decide) must be possessed by the person who complains that the specification is obscure, and that he cannot make the machine. No contrivance or addition, no trial or experiment, it is said, must be resorted to for a full knowledge of the invention.[1] This rule must, however, be taken in a limited sense. Though no inventive faculty must be exercised, nor anything new added, yet trials, if they are not essentially necessary, may be made. If the inventor leave anything to be found

[1] 2 Hen. Bla. 484.

out by experiment, the specification is bad; unless the data, manner of performing, and the expected results are so clearly given, that it may easily be done.

Reference may he made to the rudiments of that science by which the principles of the machine are explained, but not to scientific books.[1] A proposition, or truth generally known, needs no reference; and that which can be found only in some particular treatise must be explained, but not claimed as new.

If a piece of machinery be contemplated for the purpose of giving a full description of it, the several parts, as wheels, rollers, screws, springs, &c., &c., must be set forth, together with the proportion of their diameters, thickness, tension, &c.[2] Then the method by which they are united, and the relative velocities of the movable parts.[3]

If the thing specified be the component parts of *two* machines, the union of the parts that make up each of them must be clearly shown.[4] If parts of the machine are to be put on and off during some of its operations, in order to produce the desired effect, or if several articles are intended to be worked on, or several manufactures to be produced, it must be distinctly stated *what* those parts are, their *proportions* for different purposes, and *where* they are to be applied.[5]

It has been shown that the grant must not be more extensive than the invention;[6] and that where the patent is for an improvement or addition, the inventor cannot monopolize the whole subject. The specification will, therefore, be incorrect, if it contain a description of *more* than the improvement or addition;[7] unless it particularly distinguish the new from the old parts.

The inventor is not bound down to any particular mode of describing his improvement, so that he informs the public *exactly* in what his invention consists. He may describe it by *words*, or by *diagrams*,[8] but he must confine himself to his invention.

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[1] 11 East, 105.

[2] *King* v. *Arkwright*, Printed Cas. 174; Dav. Pat. Cas. 111.

[3] Id. Printed Cas. 62, 179; Dav. Pat. Cas. 122.

[4] Id. Printed Cas. 174 and 177; Dav. Pat. Cas. 111 and 117.

[5] Ibid.

[6] Godson on Pat. 59.

[7] *Bramah* v. *Hardcastle*, MSS. post, 156; and *Williams* v. *Brodie*, cited by counsel in *King* v. *Arkwright*, Printed Cas. 162.

[8] *McFarland* v. *Price*, 1 Stark, 199. Action for infringement. The patent was for certain improvements in the making of umbrellas and parasols. The specification professed to set out the improvements as specified in certain descriptions and drawings annexed; but no distinction was made, either in the description, or by any marks in the drawings, between what was new and what was old.

Ellenborough, C. J. The patentee, in his specification, ought to inform the person

The patent for the improvement of a thing, or for the thing improved, is in essence for the same manufacture.[1] The inventor may either accurately describe the addition, and then point out the method by which it is applied to the known parts; or he may describe the whole as one machine, and then particularize the parts newly discovered.

It is not absolutely necessary that the old parts should be described. They may be referred to generally, if the whole is not thereby rendered unintelligible. Thus, in Jessop's case,[2] whose invention consisted of a single movement in a watch, it was said to be sufficient to refer generally to a common watch, and then to give directions how the new part was to be added to it. There is one decision on an *improvement* which appears to be an anomaly. Harmar[3] obtained a patent for a machine. Having very much improved it

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who consults it what is new and what is old. The specification states that the improved instrument is made in manner following. That it is not true, since the description comprises what is old as well as what is new. Then it is said, that the patentee may put in aid the figures. But how can it be collected from the whole of these, in what the improvement consists?

[1] 2 Hen. Bla. 481, 482.

[2] 2 Hen. Bla. 489.

[3] *Harmar* v. *Plague*, 11 East, 101.

The patent was for "a machine invented for raising a shag on all sorts of woollen cloths, and cropping or shearing them, which together come under the description of dressing woollen cloths, and also for cropping or shearing of fustian." There were drawings of the machine. Harmar afterwards invented some improvement of his machine, for which he prayed a patent; which patent was granted upon the usual condition, that he should ascertain the nature of the said invention or the said improvements. The second specification recited the first patent, and described the *whole* of the machine, without showing in words, or marking in the drawing where the first machine ended, or from what point the improvements began. The improvement could only appear by comparing together the two specifications. It was contended for the plaintiff, that the patent and specification referring to it are to be construed together as one instrument. The first patent being enrolled, the public were bound to take notice of it; and being recited in the second, the improvements easily appeared by comparing them. That it was more convenient to give a description of the whole, than by a literal compliance to state what the improvements were

For the defendant it was said, that improvements should be distinctly marked and made known by this second specification alone, without further search or trouble.

Le Blanc, J. Suppose the specification had merely described the improvements, must not the party still have referred to the original specification, or at least have brought a full knowledge of it with him, before he could understand truly to adapt the new parts described to the old machine?

Ellenborough, J. It would lead to great inconvenience, if books of science were allowed to be referred to. A person ought to tell from the specification itself what the invention was for which the specification was granted, and how it is to be executed. If reference may be made to one why not to many works? It may not be necessary, indeed, in stating a specification of a patent for an improvement, to state precisely

he procured another patent, in which the first was recited. In the second specification, without any reference being made to the description of the former subject, the whole machine so improved was set forth, without the new parts being distinguished from the old ones. The second grant was held to be good, because the second patent, by reciting the first, referred to its specification, which by the enrolment was matter of record, and therefore supposed to be within every person's knowledge.

It must be here observed that Harmar referred to his *own* patent. It seems, by the same reasoning, that it might be laid down as a general rule, that every person, making a manufacture from the subjects of several expired patents, might recite and refer to the specifications of them, without taking any notice of their contents.

Sometimes it is difficult to determine, whether the improvements be an addition of new parts, properly so called, or the parts of an old machine newly arranged with some material alteration. In the latter case it is safer to claim the whole as a new engine; and then in the specification to distinguish accurately between the old and new manufacture, showing the peculiar qualities of each, the improvement effected, the means that produced it, and the use to which it is to be applied. From these decisions it appears that there are several ways of making a correct specification of an improvement.

First. By describing the whole manufacture, and then particularizing with great exactness the addition or improvement of the inventor.[1]

Secondly. By a description of the whole manufacture, pointing out the parts that either are old or not material to the invention.

Thirdly. By giving an accurate and intelligent description of the improvement, and the manner in which it is applied to the subject, or parts that are old.

Fourthly. By describing the whole manufacture, if it be an improvement of another for which a patent has been obtained, taking care to refer in the new specification to that of the former patent.

The observations of the court, in *Minter* v. *Mower*,[2] are worthy of atten-

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all the former known parts of the machine, and then to apply to those the improvement; but on many occasions it may be sufficient to refer generally. But, however, I feel impressed by the observation of my brother Le Blanc, that the *trouble and labor* of referring to and comparing the former specification would be fully as great if the patentee only described in this the precise improvements of the former machine. Reference may be made to general science. The court certified to the Lord Chancellor in favor of the specification.

[1] In *Bramah* v. *Hardcastle*, before Lord Kenyon, 1789, the inventor did not distinguish the part he really invented from the parts that were old in his new water-closet.

[2] *Minter* v. *Mower*, 6 Adol. & Ell. Rep. 735.

tion, in drawing a specification of a machine. In the specification the invention was described to be of "An improvement in the construction, making, or manufacturing of chairs," and to consist in the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acted as a counterbalance to the pressure against the back, and whereby a person sitting in the chair, might, by pressing against the back, cause it to take any inclination, and yet might be supported. In an action for infringing the patent, it was pleaded that the specification did not describe the invention. It was proved that a chair had previously been sold, to which a similar leverage was applied, acting by the pressure in the same way, but having also other machinery which prevented the inclination of the back from being shifted, except when a spring was touched by the hand. The jury found, that without such other machinery, the chair previously sold would have produced an equilibrium by the self-adjusting leverage; that the maker of it was the inventor of the machine, and found out the principle, but not the practical purpose to which it was now applied; and that the plaintiff had discovered such purpose.

Lord Denman, ordering a nonsuit, thus delivered the judgment of the court. "An action between the same parties has already been decided by the court of exchequer, in which the patent claimed by the plaintiff was deemed good and valid. But, on the trial in this court, an entirely new fact was given in evidence, and affirmed by the verdict of the jury; namely, that a chair very closely resembling that made by the plaintiff's patent had been made and sold before that patent was taken out. The words of the jury were these: 'We are of opinion that Browne[1] was the inventor of the machine, and found out the principle, but not the practical purpose to which it is now applied. We think that Minter (the plaintiff) made that discovery.' This statement might not be fatal to the plaintiff's title, if his invention were truly set forth in the specification; but the material issue in this cause being simply, whether the plaintiff did thereby particularly describe and ascertain the nature of the said invention, we find it needful to examine the terms of it.

"Now, the patent is taken out for 'An improvement in the construction, making, or manufacturing of chairs;' the method of making the machine, and the way in which it acts, are then fully described, without any mention of any of the means employed in Browne's chair. The specification thus concludes: 'What I claim as my invention, is the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acts as a counterbalance to the pressure against the back of such

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[1] A workman, see Godson on Pat. p. 27. Also *Barker* v. *Shaw*, before Holroyd, J., at Lancaster, 1823, in which the plaintiff was nonsuited, because his workman invented the improvement in hats.

chair, as above described.' Now it was perfectly clear, upon the evidence, that this description applies to Browne's chair, though that was encumbered with some additional machinery. The specification, therefore, claimed more than the plaintiff had invented, and would have actually precluded Mr. Browne from continuing to make the same chair that he had made before the patentee's discovery. We are far from thinking that the patentee might not have established his title by showing that a part of Browne's chair could have effected that for which the whole was designed. But his claim is not for an improvement upon Browne's leverage, but for a leverage so described that the description comprehended Browne's. We are, therefore, of opinion, that the patent cannot be sustained, and a nonsuit must be entered."

Every combination appears, at first sight, to be subject to the same rules for describing it, as an improvement or addition. The same end, a clear and intelligent description of the manufacture, without any extraneous matter, is to be obtained; but the manner of attaining it is somewhat different.

If it is only a combination of substances, materials, or parts of machines in common use, previously applied for the same or different purposes, then the specification will be correct which sets out the whole as the invention of the patentee;[1] if he clearly express that it is in respect of such new com-

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[1] *Boville* v. *Moore*, 2 Marsh. 211; S. C. Dav. Pat. Cas. 411.

A patent was taken out by Mr. Browne for "a machine or machines, for the manufacture of bobbin lace or twist net, similar to and resembling the Buckinghamshire lace net and French lace net, as made by the hand with bobbins or pillows," who assigned it to the plaintiff.

Gibbs, C. J. Now, gentlemen, the objections made to this specification upon this part of the case are, that it goes farther than it ought; that it states more to be the invention of Mr. Browne than really was so; and I think I may state generally to you, that they say that all that precedes the crossings of the threads is old, whereas he has stated it as part of his invention; and besides that they state, that the forks and dividers, which he has stated as part of his invention, are equally old. I think, with respect to the principle, if there existed, at the time Mr. Browne took out his patent engines for the making of lace, of which his was only an improvement, then his patent ought to have been only for *an improvement;* and certainly, if he could have supported his patent for an *engine*, his specification ought to have pointed out those parts only which were of his invention, as those to which his privilege applied; and if you should be of opinion that he has in his specification stated more than he is entitled to, as what was his invention, then in my opinion his specification is bad.

Now, the answer that the plaintiffs have endeavored to give to that objection is this, —they say there is nothing in the world that is absolutely new; you may refer it all to first principles. The wheels are well known; and yet you may state them in your specification as one of the means by which you effect your purpose. Levers are well known; but yet you may state them in the same way; that certainly is so. They go on to say, their invention consists not in that or this particular part, of which their machine is composed, as being new, but in the conformation of all the parts of it; the novelty consisting in that conformation; and if the new conformation of all those parts was of the plaintiff's invention, then, although every one of the parts was old,

bination or application, and of that only, without laying any claim to the merit of original invention in the use of the materials. Nothing more than the invention must be claimed. Every old part which is essential and material in producing the intended effect will be considered as claimed, if it be not designated as old. If the part in common use be even an elementary principle, or a single combination, and effect a new end, it becomes a part of the substance of the invention, and must be protested against as not being claimed.

If the invention consist of a new *set of combinations*, added to a manufacture composed of combinations, then, though the effect produced be different throughout, the specification should only describe the new combinations which have been invented, and how they are to be added to the old ones.

If the *combination* consist of the subjects of *several patents* which have expired, or of *some new ones* that have been bought, it would appear from the reasoning of Ellenborough, C. J., that a description of the method by which they were combined, with a reference to the several specifications, would be all that is required to sustain the patent.[1]

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they would be entitled to a patent for a machine composed by that new conformation of the whole; but if you find that another person had combined all those parts up to a given point, and that Mr. Browne took up his combination at that point, and went on combining beyond that, if the subsequent combinations alone were his invention, the former combinations he will have no right to. Those combinations could not exist before, unless there had existed an engine in which they were found, and if there existed before this time an engine in which they were found, it is for you to say, whether this which Mr. Browne has invented is any more than an improvement of that engine, or whether it is the invention of a new engine. If Mr. Browne has only *invented an improvement of the old engine, be it Heathcote's*, or be it any one or two engines which existed before, then his specification by which he claims the whole to himself will be bad. If, on the other hand, you think that he has invented an engine, which consists of a perfectly new conformation of parts, although all the parts were used before, yet he will be entitled to support his patent for a new machine.

Now, I wish to have what I state upon this subject observed by the counsel on both sides, that they may be aware how I put it. If a combination of those parts existed before; if a combination of a certain number of these parts existed up to a given point before, and Mr. Browne's invention sprung from that point, and added other combinations to it; then I think this specification, stating the whole machine as his invention, is bad. If, on the other hand, you think he has the merit of inventing the combination of all the parts from the beginning, then I think the specification is good, and that he is entitled to your verdict. Verdict for the defendant.

Gibbs, C. J. Gentlemen, I will just ask you this: — Do you find that the combination of the parts up to the crossing of the threads is not new?

Foreman. Yes, my lord.

Juryman. The threads then taking a new direction, and certainly the most valuable part to the plaintiff, is a new invention; but we are of opinion it is nothing more than an improvement.

[1] Harmar *v.* Playne, 11 East, 107; Godson on Pat. 159.

Pursuing the same order in giving rules for making specifications as was followed in the former chapter, when the different subjects of patents were examined, the necessary description of the fifth kind of new manufactures, principles *or methods carried into practice* by tangible means, must now be investigated. It was shown, in the last chapter, that a principle could not be the object of a patent. The impossibility of giving a description of it in every instance in which it might be used, was urged as a strong argument against its being allowed to be monopolized.

Reasons have also been assigned why a method *merely as such*, is not a proper subject for a patent. If a method can be the subject of a patent, the description of it must indeed be very accurate. It must be so clear and evident that no experiments must be necessary to learn it, and to put it in practice as beneficially as the patentee enjoys it.

If neither a principle nor a method can be the subject of a patent within the meaning of the statute of James: if, when a patent is obtained for a method, it is in fact granted for *tangible means* of carrying that method into practice;[1] it is quite evident that the specification of a method is governed by the same rules as if the description was to be given of some one kind of the above-mentioned manufactures, whether the *real subject* of the patent be a machine, improvement, or combination, and therefore, that any further comment would be superfluous.

When a chemical discovery is the foundation of the invention for which the patent has been granted, inasmuch as the substance or thing produced, and not the principle, process, or method, is the legal subject of the patent, it ought to be described. The ingredients, their proportions, the time of mixing, &c. ought to be fully stated, and then the beneficial *use* to which the substance can be applied.[2]

A manufacture, when first introduced into England, whether it be a substance or machine, an improvement of something already known here, or a combination of native discoveries, still it must be fully and correctly explained. Its specification is regulated by the same laws, and is subject to the same critical examination, as if it were an English invention.

Thus it appears that *every part* which is new, however minute, must be clearly described. In the specification of a *substance*, the simplest elements of which it can be formed, and the best modes of making and using it, must be accurately stated. In descriptions of *machines* there must with scrupulous fidelity be set forth the cheapest materials, the most exact proportions

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[1] Godson on Pat. 73.

[2] Turner *v.* Winter, 1 T. R. 602. The specification to this patent is what a scientific man, unacquainted with legal strictness, would naturally have made. It contains almost every fault generally found in the descriptions of this class of manufactures. It is, therefore, given fully in the different parts of the text.

of the parts, the most expeditious and the best mode of conducting them, with the precise times of putting on or taking off any part of the machine; and an *improvement* or new *combination* must be kept distinctly apart from the old manufacture.

The public must be put in possession of the manufacture in a way as ample and beneficial as the patentee enjoys it.

It has been shown that it is a technical, but unjust rule of law, that if the inventor claims anything in the *title* to his patent, or in the specification, which is not *new*, or has been before *used*, then the whole patent becomes void. It has also been contended, that every part should be useful as well as new; but that was overruled by the judges, in the case of *Lewis* v. *Marling*.[1]

In the first section of 5 and 6 William IV. c. 83, the law has been altered in the following words:

"Any person who, as grantee, assignee, or otherwise, hath obtained, or who shall hereafter obtain letters-patent, for the sole making, exercising, vending, or using of any invention, may, if he think fit, enter with the clerk of the patents of England, Scotland, or Ireland, respectively, as the case may be, (having first obtained the leave of his majesty's attorney-general or solicitor-general in case of an English patent, of the lord-advocate or solicitor-general of Scotland in the case of a Scotch patent, or of his majesty's attorney-general or solicitor-general for Ireland in the case of an Irish patent, certified by his fiat and signature,) a *disclaimer of any part of either the title of the invention or of the specification, stating the reason for such disclaimer*, or may with such leave as aforesaid enter a memorandum of *any alteration in the said title or specification*, not being such disclaimer or such alteration as shall *extend the exclusive right* granted by the said letters-patent; and such disclaimer or memorandum of alteration, being filed by the said clerk of the patents, and enrolled with the specification, shall be deemed and taken to be part of such letters-patent or such specification in all courts whatever; *provided* always, that any person may enter a caveat *in like manner as caveats are now used to be entered*,[2] against such disclaimer or alteration; which caveat being so entered, shall give the party entering the same a right to have notice of the application being heard by the attorney-general or solicitor-general, or lord-advocate, respectively; *provided also*, that no such disclaimer or alteration shall be receivable in evidence in any action or suit (save and except in any proceeding by *scire facias*) *pending at the time* when such disclaimer or alteration was enrolled, but in every such action or suit the original title and specification alone shall be given in evidence, and deemed and taken to be the title and specification of the invention for which

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[1] 10 B. & C. 22.

[2] See Godson on Pat. chap. v. as to the method of entering *caveats*.

the letters-patent have been or shall have been granted: *provided also*, that it shall be lawful for the attorney-general or solicitor-general, or lord-advocate, before granting such fiat, to require the party applying for the same to *advertise his disclaimer* or alteration in such manner as to such attorney-general or solicitor-general, or lord-advocate, shall seem right, and shall, if he so require such advertisement, certify in his fiat that the same has been duly made.

The entry of a disclaimer of part of a specification, under the 5 and 6 William IV. c. 83, § 1, does not give a right of action for infringements, committed previously to the disclaimer.[1]

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[1] Perry *v.* Skinner, in Exch. E. T. 1837; Law Journal, p. 127.

CHAPTER II.

PROCEEDINGS AT THE PATENT OFFICE.

I. Caveat for incomplete invention.
II. The Petition, Oath, Payment of fees.
III. Signatures of the Secretary of State and Commissioner
IV. Interfering applications.
V. Renewal and Amendment of Patents.

Caveat for Incomplete Invention.

§ 170. The twelfth section of the Act of July 4, 1836, provides that any citizen of the United States, or alien who shall have been resident in the United States one year next preceding, and who shall have made oath of his intention to become a citizen thereof, who shall have invented any new art, machine, or improvement thereof, and shall desire further time to mature the same, may, on payment of the sum of twenty dollars, file in the patent office a *caveat*, setting forth the design and purpose thereof, and its principal and distinguishing characteristics, and praying protection of his right, till he shall have matured his invention; which sum of twenty dollars, in case the person filing such caveat shall afterwards take out a patent for the invention therein mentioned shall be considered a part of the sum required for the same. And such *caveat* shall be filed in the confidential archives of the office, and preserved in secrecy. And if application shall be made by any other person within one year from the time of filing such a *caveat*, for a patent of any invention with which it may in any respect interfere, it shall be the duty of the commissioner to deposit the description, specifications, drawings, and model, in the confidential archives of the office, and to give notice, by mail, to the

person filing the caveat, of such application, who shall, within three months after receiving the notice, if he would avail himself of the benefit of his caveat, file his description, specifications, drawings, and model; and if, in the opinion of the commissioner, the specifications of claim interfere with each other, like proceedings may be had in all respects as are provided in the case of interfering applications.

The Petition, Oath, Payment of Fees, etc.

§ 171. The Act of 1836, § 6, requires an inventor who desires to obtain a patent to "*make application in writing* to the Commissioner of Patents," &c. This application in writing has, from the origin of the government, been by way of petition, generally with the specification annexed and referred to, or accompanied by the specification, filed at the same time. The form of the petition is not material, provided it set forth the facts to which the applicant is required to make oath. When filed, it is to be presumed to adopt the specification, or schedule, filed at the same time, and to ask for a patent for the invention therein described.[1]

§ 172. The applicant is also required to make oath or affirmation that he does verily believe that he is "the original and first inventor," &c., "and that he does not know or believe that the same was ever before known or used," and also of what country he is a citizen; which oath or affirmation may be made before any person authorized by law to administer oaths.[2]

§ 173. The applicant is required to make oath or affirma-

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[1] Hogg *v.* Emerson, 6 Howard, 437, 480. The rules of the Patent Office give a form of petition which it is advisable to adopt, in all cases. See Appendix.

[2] Act of July 4, 1836, § 6. The oath extends to all described in the schedule filed with the petition, as well as to the title or description of the invention contained in the petition itself. Hogg *v.* Emerson, 6 Howard, 437, 482.

tion, not that he is the original and first inventor or discoverer, but that he believes himself to be so. He cannot know absolutely whether he first invented or discovered the thing for which he claims a patent, but he may believe that he did; and it is only when he is willing to make oath that he so believes, that the law grants him the patent. A subsequent section of the same statute provides for one case, in which a patent shall still be valid, if issued to an applicant who believed himself to be the first inventor or discoverer, although he was not so, in point of fact. This case is where the invention or discovery had been previously known or used in a foreign country, but had not been patented or described in any public work, and the patentee was ignorant of that fact. If the patentee, before making his application, had learned that the thing had been known or used in a foreign country, although not patented or described in any foreign work, he cannot have believed himself to be the first inventor or discoverer. But if he learn the fact after he has taken the oath, it will not invalidate his patent.[1]

§ 174. An irregularity in the form of the oath will be cured by the issuing of the patent, and it seems that a patent would be valid, when issued, although the oath might not have been taken at all. It has been held that the taking of the oath is only a prerequisite to the granting of the patent, and in no degree essential to its validity; so that if the proper authorities from inadvertence or any other cause, should grant a patent, where the applicant had not made oath according to the requisitions of the statute, the patent would still be valid. But where the oath has been taken and is recited in the patent, it is the foundation of the *onus probandi* thrown on the party who alleges that the patentee was not the original and first inventor.[2]

§ 175. The ninth section of the statute provides that before

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[1] Act 4th July, 1836, § 15.

[2] Alden v. Dewey, 1 Story's R. 336, 341.

any application for a patent shall be considered by the commissioner, the applicant shall pay into the treasury of the United States, or into any of the deposit banks to the credit of the Treasury, if he be a citizen of the United States, or an alien and shall have been resident in the United States for one year next preceding, and shall have made oath of his intention to become a citizen thereof, the sum of thirty dollars; if a subject of the King of Great Britain, the sum of five hundred dollars.[1]

Signatures of the Secretary of State and of the Commissioner of Patents.

§ 176. The Act of July 4, 1836, c. 357, § 5, provides that patents shall be issued from the patent office "in the name of the United States, and under the seal of said office, and be signed by the secretary of state, and countersigned by the commissioner of said office."

§ 177. It has been held that the sanction of the secretary of state to a correction of a clerical mistake in letters-patent, may be given in writing afterwards; and that he need not resign the letters themselves. But the commissioner, if he be the same officer who countersigned the letters originally, may make the correction, without re-signing or re-sealing. If the mistake occurs in the copy of the patent, and not in the record or enrolment, it may be corrected by the commissioner and made to conform to the original. If the mistake in the enrolled patent be a material one, the letters cannot operate except on cases arising after the correction is made; but if the correction be of a clerical mistake only, it operates back to the original date of the letters, unless, perhaps, as to third persons, who have acquired intervening rights to be affected by the alteration.[2]

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[1] Act 4th July, 1836, § 9.

[2] Woodworth *v.* Hall, 1 Woodb. & M. 248; S. C. Ibid. 389.

§ 178. It has also been held, that a signature to the patent, and a certificate of copies by a person calling himself "acting commissioner," is sufficient on its face in controversies between the patentee and third persons, as the law recognizes an acting commissioner to be lawful.[1]

Renewal or Amendment of a Patent.

§ 179. The Act of July 4, 1836, § 13, makes the following provision in case of a defective or insufficient specification, or of the subsequent invention of something which the patentee wishes to add to his specification.

§ 180. "And be it further enacted: That whenever any patent which has heretofore been granted, or which shall hereafter be granted, shall be inoperative or invalid, by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specification as his own invention, more than he had or shall have a right to claim as new; if the error has or shall have arisen by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention, it shall be lawful for the commissioner, upon the surrender to him of such patent, and the payment of the further duty of fifteen dollars, to cause a new patent to be issued to the said inventor, for the same invention, for the residue of the period then unexpired for which the original patent was granted, in accordance with the patentee's corrected description and specification. And in case of his death, or any assignment by him made of the original patent, a similar right shall vest in his executors, administrators, or assignees. And the patent so re-issued, together with the corrected description and specification, shall have the same effect and operation in law, on the

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[1] Woodworth *v.* Hall, 1 Woodb. & M. 248. Where evidence is offered to prove that the "acting commissioner" who signs a patent was not appointed by the President, it is doubtful whether it is competent in controversies where he is not a party. S. C. 1 Woodb. & M. 389.

trial of all actions, hereafter commenced for causes subsequently accruing, as though the same had been originally filed in such corrected form, before the issuing out of the original patent. And whenever the original patentee shall be desirous of adding the description and specification of any new improvement of the original invention or discovery which shall have been invented or discovered by him subsequent to the date of his patent, he may, like proceedings being had in all respects as in the case of original applications, and on the payment of fifteen dollars, as herein before provided, have the same annexed to the original description and specification; and the commissioner shall certify, on the margin of such annexed description and specification, the time of its being annexed and recorded; and the same shall thereafter have the same effect in law, to all intents and purposes, as though it had been embraced in the original description and specification." [1]

181. It has been held by Mr. Justice Story that the decision of the Commissioner in respect to the surrendering of an old patent, and granting a new one, is not reëxaminable elsewhere, unless it appear on the face of the patent that he had exceeded his authority, and there is a clear repugnancy between the old and the new patent, or the new one has been obtained by col-

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[1] The Act of March 3, 1837, § 8, makes a further provision on this subject:

"And be it further enacted, That, whenever application shall be made to the commissioner for any addition of a newly-discovered improvement to be made to an existing patent, or whenever a patent shall be returned for correction and re-issue, the specification of claim annexed to every such patent shall be subject to revision and restriction, in the same manner as are original applications for patents; the commissioner shall not add any such improvement to the patent in the one case, nor grant the re-issue in the other case, until the applicant shall have entered a disclaimer, or altered his specification of claim in accordance with the decision of the commissioner; and in all such cases, the applicant, if dissatisfied with such decision, shall have the same remedy and be entitled to the benefit of the same privileges and proceedings as are provided by law in the case of original applications for patents."

lusion between the Commissioner and the patentee. If neither of these things appears, then the presumption that the renewed patent is for the same invention as the old patent, is conclusive.[1]

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[1] Woodworth *v.* Stone, 3 Story's R. 749, 753. In this case, which was in equity, the learned judge said, "But the most material objection taken is, that the new patent is not for the same invention as that which has been surrendered. And certainly, if this be correct, there is a fatal objection to the prolongation of the injunction. But is the objection well founded in point of fact? It is said, that the present patent is for a combination only, and that the old patent was for a combination and something more, or different But I apprehend that, upon the face of the present patent, the question is scarcely open for the consideration of the court; and, at all events, certainly not open in this stage of the cause. I have already, in another cause, had occasion to decide that where the commissioner of patents accepts a surrender of an old patent and grants a new one, under the Act of 1836, ch. 357, his decision, being an act expressly confided to him by law, and dependent upon his judgment, is not reëxaminable elsewhere; and that the court must take it to be a lawful exercise of his authority, unless it is apparent upon the very face of the patent, that he has exceeded his authority, and there is a clear repugnancy between the old and the new patent, or the new one has been obtained by collusion between the commissioner and the patentee. Now, upon the face of it, the new patent, in the present case, purports to be for the same invention and none other, that is contained in the old patent. The avowed difference between the new and the old, is, that the specification in the old is defective, and that the defect is intended to be remedied in the new patent. It is upon this very ground, that the old patent was surrendered and the new patent was granted. The claim in the new patent is not of any new invention, but of the old invention more perfectly described and ascertained. It is manifest that in the first instance, the commissioner was the proper judge whether the invention was the same or not, and whether there was any deficit in the specification or not, by inadvertence, accident, or mistake; and consequently, he must have decided that the combination of machinery claimed in the old patent was, in substance, the same combination and invention claimed and described in the new. My impression is, that at the former trial of the old patent before me, I held the claim substantially (although obscurely worded) to be a claim for the invention of a particular combination of machinery, for planing, tongueing, and grooving, and dressing boards, &c.; or, in other words, that it was the claim of an invention of a planing machine or planing apparatus such as he had described in his specification.

It appears to me, therefore, that *primâ facie*, and at all events, in this

§ 182. The same learned judge has also held, that the statutes which authorize the reissue of a patent, because of a de-

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stage of the cause it must be taken to be true, that the new patent is for the same invention as the old patent; and that the only difference is, not in the invention itself, but in the specification of it. In the old, it was defectively described and claimed. In the new, the defects are intended to be remedied. Whether they are effectually remedied is a point not now properly before the court. But as the commissioner of patents has granted the new patent as for the same invention as the old, it does not appear to me, that this court is now at liberty to reverse his judgment, or to say that he has been guilty of an excess of authority, at least (as has been already suggested) not in this stage of the cause; for that would be for the court of itself to assume to decide many matters of fact, as to the specification, and the combination of machinery in both patents, without any adequate means of knowledge or of guarding itself from gross error. For the purpose of the injunction, if for nothing else, I must take the invention to be the same in both patents, after the commissioner of Patents has so decided, by granting the new patent."

In Allen *v.* Blunt, 3 Story's R. 742, 743, which was an action at law, he observed, "The 13th section of the Patent Act, of 1836, ch. 357, enacts, that whenever any patent shall be inoperative or invalid, by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specification, as his own invention, more than he had, or shall have a right to claim as new, if the error has or shall have arisen by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention, it shall be lawful for the commissioner, upon the surrender to him of such patent, and the payment of the further duty of fifteen dollars, to cause a new patent to be issued for the same invention for the residue of the term then unexpired, for which the original patent was granted, in accordance with the patentee's corrected description and specification. Now, the specification may be defective or insufficient, either by a mistake of law, as to what is required to be stated therein in respect to the claim of the inventor, or by a mistake of fact, in omitting things which are indispensable to the completeness and exactness of the description of the invention, or of the mode of constructing, or making, or using the same. Whether the invention claimed in the original patent, and that claimed in the new amended patent, is substantially the same, is and must be in many cases a matter of great nicety and difficulty to decide. It may involve consideration of fact as well as of law. Who is to decide the question? The true answer is, the Commissioner of Patents; for the law entrusts him with the authority, not only to accept the surrender, but to grant the new amended patent. He is bound

fective or redundant specification or description, without fraud, or for the purpose of adding thereto an improvement, do not require the patentee to claim, in his renewed patent, all things, therefore by the very nature of his duties, to inquire into and ascertain, whether the specification is sufficient or insufficient, in point of law or fact, and whether the inventor has claimed more than he has invented, and in such case, whether the error has arisen from inadvertency, accident, or mistake, or with a fraudulent or deceptive intention. No one can well doubt, that in the first instance, therefore, he is bound to decide the whole law and facts arising under the application for the new patent. *Primâ facie* therefore, it must be presumed that the new amended patent has been properly and rightfully granted by him. I very much doubt whether his decision is or can be reëxaminable in any other place, or in any other tribunal, at least, unless his decision is impeached on account of gross fraud or connivance between him and the patentee; or unless his excess of authority is manifest upon the very face of the papers; as, for example, if the original patent were for a chemical combination, and the new amended patent were for a machine. In other cases, it seems to me, that the law, having entrusted him with authority to ascertain the facts, and to grant the patent, his decision, *bonâ fide* made, is conclusive. It is like many other cases, where the law has referred the decision of a matter to the sound discretion of a public officer, whose adjudication becomes conclusive. Suppose the Secretary of the Treasury should remit a penalty or forfeiture incurred by a breach of the laws of the United States, would his decision be reëxaminable in any court of law upon a suit for the penalty or forfeiture? The President of the United States is, by law, invested with authority to call forth the militia to suppress insurrections, to repel invasions, and to execute the laws of the Union; and it has been held by the supreme court of the United States, that his decision as to the occurrence of the exigency, is conclusive. (Martin *v.* Mott, 12 Wheat. R. 19.) In short it may be laid down as a general rule, that, where a particular authority is confided to a public officer to be exercised by him in his discretion upon the examination of facts, of which he is made the appropriate judge, his decision upon these facts is, in the absence of any controlling provisions, absolutely conclusive as to the existence of those facts. My opinion, therefore, is, that the grant of the present amended patent by the Commissioner of Patents is conclusive as to the existence of all the facts, which were by law necessary to entitle him to issue it; at least, unless it was apparent on the very face of the patent itself, without any auxiliary evidence, that he was guilty of a clear excess of authority, or that the patent was procured by a fraud between him and the patentee, which is not pretended in the present case."

which were claimed in his original patent, but they give him the privilege of retaining whatever he deems proper.[1]

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[1] Carver *v.* The Braintree Manuf. Co. 2 Story's R. 432, 438. In this case, the learned judge said: "The next objection is, that the patentee has omitted some things in his renewed patent, which he claimed in his original patent as a part of his invention, viz., the knob, the ridge, and the flaring of the lateral surface of the rib above the saw, and that he claims in his renewed patent the combination of the thickness and the slope of the front and back surfaces of the rib. Now, by the thirteenth section of the Patent Act of 1836, ch. 357, it is provided, that whenever any patent, which is granted, "shall be inoperative or invalid by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specification, as his own invention, more than he had or shall have a right to claim as new, if the error has or shall have arisen by inadvertency, mistake or accident, and without any fraudulent or deceptive intention, it shall be lawful for the commissioner, upon the surrender to him of such patent, and the payment of the further sum of fifteen dollars, to cause a new patent to be issued to the inventor for the same invention, for the residue of the period then unexpired for which the original patent was granted, in accordance with the patentee's corrected description and specification." And it is afterwards added, that, "whenever the original patentee shall be desirous of adding the description of any new improvement of the original invention or discovery, which shall have been invented or discovered by him subsequent to the date of his patent, he may, like proceedings being had in all respects as in the case of original applications, and on the payment of fifteen dollars, as hereinbefore provided, have the same annexed to the original description and specification. The act of 1837, ch. 45, § 8, further provides, "that whenever any application shall be made to the commissioner for any addition, or a newly discovered improvement, to be made to an existing patent, or whenever a patent shall be returned for correction and reissue, the specification annexed to every such patent shall be subject to revision and restriction, in the same manner as original applications for patents; the commissioner shall not add any such improvements to the patent in the one case, nor grant the reissue in the other case, until the applicant shall have entered a disclaimer, or altered his specification of claim, in accordance with the decision of the commissioner." (Act of 1836, ch. 357, § 15.)

Now I see nothing in these provisions which, upon a reissue of a patent, requires the patentee to claim all things in the renewed patent, which were claimed as his original invention, or part of his invention in his original patent. On the contrary, if his original patent claimed too much, or if the commissioner deemed it right to restrict the specification, and the patentee

§ 183. When a patent is thus renewed, it is granted for the unexpired term, commencing from the date of the original patent which is surrendered. Consequently it operates from the commencement of the original, and will enure to the benefit of assignees, who became such before the renewal, although no assignment is made to them after the renewal.[1]

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acquiesced therein, it seems to me, that, in each case, the renewed patent, if it claimed less than the original, would be equally valid. A specification may be defective and unmaintainable under the patent act, as well by an excess of claim, as by a defect in the mode of stating it. How can the court in this case judicially know, whether the patentee left out the knob and ridge, and flaring of the lateral surface of the rib, in the renewed patent, because he thought, that they might have a tendency to mislead the public by introducing what, upon further reflection, he deemed immaterial or unessential, and that the patent would thus contain more than was necessary to produce the described effect, and be open to an objection, which might be fatal to his right, if it was done to deceive the public? (Act of 1836, ch. 357, § 15.) Or, how can the court judicially know, that the commissioner did not positively require this very omission? It is certain, that he might have given it his sanction. But I incline very strongly to hold a much broader opinion; and that is, that an inventor is always at liberty in a renewed patent to omit a part of his original invention, if he deems it expedient, and to retain that part only of his original invention, which he deems it fit to retain. No harm is done to the public by giving up a part of what he has actually invented; for the public may then use it; and there is nothing in the policy or terms of the patent act, which prohibits such a restriction.

The other part of the objection seems to me equally untenable. If the description of the combination of the thickness, and the slope of the front and back surfaces of the rib, were a part of the plaintiff's original invention, (as the objection itself supposes,) and were not fully stated in the original specification, that is exactly such a defect, as the patent acts allow to be remedied. A specification may be defective, not only in omitting to give a full description of the mode of constructing a machine, but also in omitting to describe fully in the claim, the nature and extent, and character of the invention itself. Indeed this latter is the common defect, for which most renewed patents are granted."

[1] Woodworth *v.* Stone, 3 Story's R. 749. Woodworth *v.* Hall, 1 Woodbury & Minot, 248. Both of these cases related to the same patent. In the first, Mr. Justice Story said, "If the present case had stood merely

§ 184. The Supreme Court of the United States have decided, upon great consideration, that the Commissioner of

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upon the original bill, it appears to me clear, that the motion to dissolve the injunction granted upon that bill, ought to prevail, because, by the surrender of the patent, upon which that bill is founded, the right to maintain the same would be entirely gone. I agree that it is not in the power of the patentee, by a surrender of his patent, to affect the rights of third persons, to whom he has previously, by assignment, passed his interest in the whole or a part of the patent, without the consent of such assignees. But, here, the supplemental bill admits, that the assignees, who are parties to the original and supplemental bill, have consented to such a surrender. They have, therefore, adopted it; and it became theirs in the same manner as if it had been their personal act, and done by their authority.

The question, then, is precisely the same, as if the suit were now solely in behalf of the patentee. In order to understand with clearness and accuracy, some of the objections to the continuance of the injunction, it may be necessary to state, that the original patent to William Woodworth, (the inventor,) who is since deceased, was granted on the 27th of December, 1828. Subsequently, under the 18th section of the act of 1836, ch. 357, the commissioner of Patents, on the 16th of November, 1842, recorded the patent in favor of William W. Woodworth, the administrator of William Woodworth, (the inventor,) for seven years, from the 27th of December, 1842. Congress, by an act passed at the last session, (Act of 26th of February, ch. 27,) extended the time of the patent for seven years, from and after the 27th of December, 1849, (to which time the renewed patent extended); and the Commissioner of Patents was directed to make a certificate of such extension in the name of the administrator of William Woodworth, (the inventor,) and to append an authenticated copy thereof to the original letters-patent, whenever the same shall be requested by the said administrator or his assigns. The Commissioner of Patents, accordingly, on the 3d of March, 1845, at the request of the administrator, made such certificate on the original patent. On the 8th day of July, 1845, the administrator surrendered the renewed patent granted to him, "on account of a defect in the specification." The surrender was accepted, and a new patent was granted on the same day to the administrator, reciting the preceding facts, and that the surrender was "on account of a defective specification," and declaring that the new patent was extended for fourteen years, from the 27th December, 1828, "in trust for the heirs at law, of the said W. Woodworth, (the inventor,) their heirs, administrators or assigns."

Now, one of the objections taken to the new patent is, that it is for the term of fourteen years, and not for the term of seven years, or for two suc-

Patents can lawfully receive a surrender of letters-patent for a defective specification, and issue new letters patent upon an

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cessive terms of seven years. But it appears to me that this objection is not well founded, and stands *inter Apices juris;* for the new patent should be granted for the whole term of fourteen years, from the 27th of December, and the legal effect is the same as it would be, if the patent was specifically renewed for two successive terms of seven years. The new patent is granted for the unexpired term only, from the date of the grant, viz., for the unexpired period existing on the 8th of July, 1845, by reference to the original grant in December, 1828. It is also suggested, that the patent ought not to have been in trust for the heirs at law of the said W. Woodworth, their heirs, administrators or assigns." But this is, at most, a mere verbal error, if indeed it has any validity whatsoever; for the new patent will, by operation of law, enure to the sole benefit of the parties, in whose favor the law designed it should operate, and not otherwise. It seems to me that the case is directly within the purview of the 10th and 13th sections of the act of 1836, ch. 357, taking into consideration their true intent and objects.

Another objection urged against the continuation of the injunction is, that the breach of the patent assigned in the original bill, can have no application to the new patent, and there is no ground to suggest, that, since the injunction was granted, there has been any new breach of the old patent, or any breach of the new patent. But it is by no means necessary, that any such new breach should exist. The case is not like that of an action at law for the breach of a patent, to support which, it is indispensable to establish a breach before the suit was brought. But in a suit in equity, the doctrine is far otherwise. A bill will lie for an injunction, if the patent right is admitted or has been established, upon well-grounded proof of an apprehended intention of the defendant to violate the patent right. A bill, *quia timet*, is an ordinary remedial process in equity. Now, the injunction already granted, (supposing both patents to be for the same invention,) is *primâ facie* evidence of an intended violation, if not of an actual violation."

In the last case, Mr. Justice Woodbury said, "The original patent for fourteen years, given in December, 1828, expired in 1842, and though it was extended by the board for seven years more, which would last till 1849, and by Congress for seven more, which would not expire till 1856, yet all of these patents were surrendered July 8th, 1845, and a new one taken out for the whole twenty-eight years from December, 1828. This was done, also, with some small amendments or corrections, in the old specification of 1828. After these new letters-patent for the whole term, no assignment having been made to Washburn and Brown, but only one previously on the

amended specification, after the expiration of the term for which the original patent was granted, and pending the existence of an extended term of seven years. Such surrender and renewal may be made at any time during such extended term.[1]

§ 185. Specifications may also be amended by another process, that of filing a disclaimer, whenever, through inadvertence, accident, or mistake, the original claim was too broad, claiming more than that of which the patentee was the original or first inventor, provided some material and substantial part of the thing patented is justly and truly his own. Such a disclaimer may be filed in the patent office by the patentee, his administrator, executors, and assigns, whether of the whole or of a sec-

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2d of January, 1843, the plaintiffs contend that all the previous letters being surrendered, and a new specification filed, and new letters issued, any conveyance of any interest under the old letters is inoperative and void under the new ones; and hence that Washburn and Brown possess no interest in these last, and are improperly joined in the bill.

But my impression, as at present advised, is, that when a patent has been surrendered, and new letters are taken out with an amended specification, the patent has been always considered to operate, except as to suits for violations committed before the amendment, from the commencement of the original term. The amendment is not because the former patent or specification was utterly void, as seems to be the argument, but was defective or doubtful in some particular, which it was expedient to make more clear. But it is still a patent for the same invention. It can by law include no new one, and it covers only the same term of time which the former patent and its extensions did.

In the present case, these are conceded to have been the facts; and it is an error to suppose that on such facts the new letters ought to operate only from their date. By the very words of those letters, no less than by the reasons of the case as just explained, they relate back to the commencement of the original term, and for many purposes should operate from that time."

[1] Wilson *v.* Rousseau, 4 Howard, 646. If a new patent, issued on a surrender of an old one, be void for any cause connected with the acts of public officers, it is questionable whether the original patent must not be considered in force till its term had expired. Woodworth *v.* Hall, 1 Woodb. & M. 389.

tional interest in the patent; and it will be thereafter taken and considered as part of the original specification, to the extent of the interest of the disclaimant in the patent, and by those claiming by or under him subsequent to the record thereof.[1]

§ 186. Patents are sometimes extended by special Acts of Congress, passed upon the application of the patentees. But by the Act of July 4th, 1836, c. 357, § 18, the Secretary of State, the Commissioner of the Patent office, and the Solicitor of the Treasury were constituted a board of commissioners to hear evidence for and against the extension prayed for, and to decide whether, having due regard to the public interest therein, it is just and proper that the term of the patent should be extended, because the patentee has failed to obtain a reasonable remuneration. The commissioners being satisfied that the patent ought to be renewed, it was made the duty of the Commissioner of Patents to make a certificate on the original patent, showing that it is extended for a further term of seven years from the expiration of the first term.

§ 187. But by a very recent statute this power is vested solely in the Commissioner of Patents, who is required to refer the application to the principal examiner, having charge of the class of inventions to which the case belongs, and, upon his report, to grant or refuse the patent, upon the same principles and rules that have governed the board provided by the former act.[2]

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[1] Act of Mar. 3, 1837, § 7. As to the effect of a disclaimer on actions. See the Chapter on REMEDY.

[2] Act of Cong. May 27, 1848, § 1. This act declares that no patent shall be extended for a longer term than seven years.

PART III.

TRANSMISSION OF THE INTEREST

IN

LETTERS-PATENT.

PART III.

TRANSMISSION OF THE INTEREST IN LETTERS-PATENT.

CHAPTER I.

OF ASSIGNMENTS AND LICENSES.

§ 188. The Act of Congress of July 4, 1836, § 11, provides "that every patent shall be assignable in law, either as to the whole interest, or any undivided part thereof, by any instrument in writing; which assignment, and also every grant and conveyance of the exclusive right under any patent, to make and use, and to grant to others to make and use the thing patented within and throughout any specified part or portion of the United States, shall be recorded in the patent office within three months from the execution thereof, for which the assignee or grantee shall pay to the commissioner the sum of three dollars."

§ 189. The interest that is thus made assignable by statute is undoubtedly assignable at common law. But it has been deemed proper to regulate the assignment of patents by statute. An invention may be assigned for the patent before it is taken out, so as to vest in the assignee the exclusive interest when the patent has issued; but the application must be made and the specification duly sworn to by the inventor, and the assignment must be recorded.[1] The interest in a patent may also be

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[1] Act of Mar. 3, 1837, § 6. Herbert *v.* Adams, 4 Mas. 15; Dixon *v.*

assigned by operation of law, in case of the bankruptcy of the patentee, as well as by his voluntary assignment. There is no question that a patent already obtained passes to assignees in bankruptcy; and in England it has been held that a patent issued after an act of bankruptcy and an assignment by the commissioners, but before the bankrupt had obtained his certificate, passes to the assignees.[1] It is necessary, however, that the invention should have been perfected, and, at least, that the bankrupt inventor should have applied for a patent. It was said in the case just cited, that the schemes which a man has in his head, or the fruits which he may make of them do not pass; but if he has carried his schemes into effect, and thereby acquired a beneficial interest, that interest is of a nature to be affected by an assignment in bankruptcy. Under our system, I conceive that such an interest would have been acquired, after the application for a patent. The party has then done all that the law requires for the creation of the interest, and the issue of the patent furnishes him with the evidence of his exclusive right. Whether an invention perfected and reduced to practice, capable of supporting a patent, but for which no application had been made for a patent, at the time when the assignment in bankruptcy attaches to the bankfupt's effects, would pass to the assignees, is a more difficult question. The mere material in which the invention had been incorporated would undoubtedly pass, but this is distinguished from the invention itself, which has not become a vested interest under the patent law, until the proper application has been made by the proper party, who must be the inventor and no one else. It would seem that the assignees would not render themselves liable to an action for infringement, at the suit of the subsequent patentee (the bank-

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Moyer, 4 Wash. 71, 72. So also, it has been held that a contract may be made to convey a future invention, as well as a past one, and for any improvement or maturing of a past one; and that a bill in equity will lie to compel a specific performance. Nesmith *v.* Calvert, 1 Woodb. & M. 34.

[1] Hesse *v.* Stevenson, 3 Bos. & P. 565.

rupt) for selling such materials, as in the case of a newly invented machine, patented after the property in the materials had passed to them;[1] but whether the purchaser could thus acquire any right, as against the inventor, to use those materials in the shape of the invention, as intended to be used by the inventor, who had used due diligence in obtaining his patent, may admit of doubt.

§ 190. The statute renders it necessary to record the assignment in the Patent office. Three classes or degrees of interest by assignment, and no others, are thus required to be recorded; *first*, an assignment of the whole patent; *second*, an assignment of an undivided part of the whole patent; and *third*, a grant or conveyance of the exclusive right under the patent for any specified part or portion of the United States. Assignments, of these several classes, must be recorded in the Patent office within three months of the execution thereof, to affect intermediate *bonâ fide* purchasers, without notice. But it has been held that in other respects the statute is merely directory, and that any subsequent recording will be sufficient to pass the title to the assignee.[2]

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[1] Sawin *v.* Guild, 1 Gallis. 485.

[2] Brooks *v.* Byam, 2 Story's R. 526; Pitts *v.* Whitman, Ib. 609, 614. In this last case, Mr. Justice Story said, "The first objection taken upon the motion for a new trial is, that the deed of assignment from John A. Pitts to the plaintiff, dated on the 17th of April, 1838, was not recorded in the Patent office until the 19th of April, 1841, after the present suit was commenced; whereas it ought to have been recorded within three months after the execution thereof. By the Patent Act of 1793, ch. 55, § 4, every assignment when recorded in the office of the Secretary of State, was good to pass the title of the inventor, both as to right and responsibility; but no time whatever was prescribed within which the assignment was required to be made. By the 11th section of the Act of 1836, ch. 357, it is provided, "That every patent shall be assignable in law, either as to the whole interest or any undivided part thereof, by any instrument in writing; which assignment, and also every grant and conveyance of an exclusive right under any patent to make and use, and to grant to others to make and use, the

§ 191. But the assignee can maintain no suit, in law or equity,

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thing patented within and throughout any specified portion of the United States, shall be recorded in the Patent office within three months from the execution thereof." Now, it is observable, that there are no words in this enactment, which declare that the assignment, if not recorded, shall be utterly void; and the question therefore, is, whether it is to be construed as indispensable to the validity of an assignment, that it should be recorded within the three months, as a *sine qua non;* or whether the statute is merely directory for the protection of purchasers. Upon the best reflection which I have been able to bestow upon the subject, my opinion is, that the latter is the true interpretation and object of the provision. My reasons for this opinion are, the inconvenience and difficulty, and mischiefs, which would arise upon any other construction. In the first place, it is difficult to say why, as between the patentee and the assignee, the assignment ought not to be held good as a subsisting contract and conveyance, although it is never recorded by accident, or mistake, or design. Suppose the patentee has assigned his whole right to the assignee for a full and adequate consideration, and the assignment is not recorded within the three months, and the assignee should make and use the patented machine afterwards; could the patentee maintain a suit against the assignee for such making or use as a breach of the patent, as if he had never parted with his right? This would seem to be most inequitable and unjust; and yet if the assignment became a nullity and utterly void by the non-recording within the three months, it would seem to follow as a legitimate consequence, that such suit would be maintainable. So strong is the objection to such a conclusion, that the learned counsel for the defendant admitted at the argument, that as between the patentee and the assignee the assignment would be good, notwithstanding the omission to record it. If so, then it would seem difficult to see why the assignment ought not to be held equally valid against a mere wrong doer, piratically invading the patent right.

Let us take another case. Could the patentee maintain a suit against a mere wrong doer, after the assignment was made, and he had thereby parted with all his interest, if the assignment was not duly recorded? Certainly it must be conceded that he could not, if the assignment did not thereby become a mere nullity, but was valid as between himself and the assignee; for then there could accrue no damage to the patentee, and no infringement of his rights under the patent. Then, could the assignee in such a case, maintain a suit for the infringement of his rights under the assignment? If he could not, then he would have rights without any remedy. Nay, as upon this supposition, neither the patentee nor the assignee could maintain any suit for an infringement of the patent, the patent right itself would be utterly extinguished in point of law, for all transferable purposes. Again; could the

upon the patent, either as a sole or as a joint plaintiff, against

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assignee, in such a case, maintain a suit for a subsequent infringement against the patentee? If he could, then the patentee would be in a worse predicament than a mere wrong-doer. If he could not, then the assignment would become in his hands, in a practical sense, worthless as it would be open to depredations on all sides. On the contrary, if we construe the 10th section of the act to be merely directory, full effect is given to the apparent object of the provision, the protection of purchasers. Why should an assignment be required to be recorded at all? Certainly not for the benefit of the parties, or their privies; but solely for the protection of purchasers, who should become such, *bonâ fide*, for a valuable consideration, without notice of any prior assignment. By requiring the recording to be within three months, the act, in effect, allows that full period for the benefit of the assignee, without any imputation or impeachment of his title for *laches* in the intermediate time. If he fails to record the assignment within the three months, then every subsequent *bonâ fide* purchaser has a right to presume that no assignment has been made within that period. If the assignment has not been recorded until after the three months, a prior purchaser ought, upon the ground of *laches*, to be preferred to the assignee. If he purchases after the assignment has been recorded, although not within the three months, the purchaser may justly be postponed, upon the ground of *mala fides*, or constructive notice of the assignment. In this way, as it seems to me, the true object of the provision is obtained, and no injustice is done to any party. In respect to mere wrong-doers, who have no pretence of right or title, it is difficult to see what ground of policy or principle there can be in giving them the benefit of the objection of the non-recording of the assignment. They violate the patent right with their eyes open; and as they choose to act *in fraudem legis*, it ought to be no defence, that they meant to defraud or injure the patentee, and not the assignee. Indeed, if the defence were maintainable, it would seem to be wholly immaterial whether they knew of the assignment or not.

In furtherance then of right and justice, and the apparent policy of the act, *ut res magis valeat quam pereat*, and in the absence of all language importing that the assignment, if unrecorded shall be deemed void, I construe the provision as to recording to be merely directory, for the protection of *bonâ fide* purchasers without notice. And assuming that the recording within the three months is not a prerequisite to the validity of the assignment, it seems to me immaterial (even admitting that a recording at some time is necessary,) that it is not made until after the suit is brought. It is like the common case of a deed required by law to be registered, on which the plaintiff founds his title, where it is sufficient, if it be registered before the trial, although after the suit is brought; for it is still admissible in evi-

third persons, until his assignment has been recorded, according to the requisitions of the statute.[1] For the purposes of such a suit, however, it will be sufficient if the assignment is recorded at any time before the trial or hearing.[2]

§ 192. An assignment vests in the assignee an interest in the patent, indefeasible by act of the patentee, so that the patentee cannot, by a surrender of his patent, affect the rights of an assignee, to whom he has previously granted the whole or a part of the patent, without the consent of such assignee.[3] In fact, the statute which authorizes a surrender and reissue of a patent, on account of a defective specification, expressly saves the rights of assignees in the patent, by this clause; "and in case of his (the patentee's) death, or any assignment by him, made of the original patent, a similar right (that of surrender and reissue) shall vest in his executors, administrators, or assignees."[4] Strictly, therefore, an assignee should be a party to the surrender; but if he is not, and the surrender is made by the patentee, and the patent is reissued to him, it seems that assignments, made before the surrender, are not vacated, but the patent remains the same, in contemplation of law, and the interests of assignees remain the same, without any new assignment.[5]

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dence as a deed duly registered." See also Boyd *v.* McAlpin, 3 McLean's R. 427.

[1] Wyeth *v.* Stone, 1 Story's R. 273.

[2] Pitts *v.* Whitman, *ut supra*.

[3] Woodworth *v.* Stone, 3 Story's R. 749, 750.

[4] Act of 1836, § 13.

[5] Woodworth *v.* Hall, 1 Woodbury & Minot, 248, 256. "The original patent for fourteen years, given in December, 1828, expired in 1842, and though it was extended by the board for seven years more, which would last till 1849, and by congress for seven more, which would not expire till 1856, yet all of these patents were surrendered July 8th, 1845, and a new one taken out for the whole twenty-eight years, from December, 1828. This was done, also, with some small amendments or corrections, in the old specification of 1828. After these new letters-patent for the whole term, no assignment having been made to Washburn and Brown, but only one previously, on the 2d of January, 1843, the plaintiffs contend that all the previous letters

§ 193. *A fortiori*, if the assignee of a patent has consented to the surrender, although he is not a party on the record of

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being surrendered, and a new specification filed, and new letters issued, any conveyance of any interest under the old letters is inoperative and void under the new ones; and hence, that Washburn and Brown possess no interest in these last, and are improperly joined in the bill.

But my impression, as at present advised, is, that when a patent has been surrendered, and new letters are taken out with an amended specification, the patent has been always considered to operate, except as to suits for violations committed before the amendment, from the commencement of the original term. The amendment is not because the former patent or specification was utterly void, as seems to be the argument, but were defective or doubtful in some particular, which it was expedient to make more clear. But it is still a patent for the same invention. It can by law include no new one, and it covers only the same term of time which the former patent and its extensions did. In the present case, these are conceded to have been the facts, and it is an error to suppose, that on such facts, the new letters ought to operate only from their date. By the very words of those letters, no less than by the reasons of the case, as just explained, they relate back to the commencement of the original term, and for many purposes should operate from that time. I do not say for all, as an exception will hereafter be noticed. This is in strict analogy to amended writs and amended judgments, which for most purposes, have the same effect as if the amended matter was in them originally.

Again, if such were not the result generally, the new letters would be treated as taking out a new patent, or an old one in a form then first valid; and, in such a view, would, of course, run fourteen years from the date of the new letters, instead of only fourteen from the issue of the original letters; or if they had been extended as here, fourteen longer, they would not run only twenty-eight years from the beginning of the original term, that is, December, 1828, as here, but twenty-eight years from July, 1845, the date of the new letters.

Besides these considerations, it has been held, that recoveries under the original patent are evidence after the new letters and new specification, to strengthen the title of the plaintiff so as to obtain an injunction; thus treating the patent as one and the same, and the conveyance of it once, therefore, for a specified term, as good for the term, whether an amended specification be filed or not before the term closes. See Orr *v.* Littlefield, 1 Woodb. & M. p. 13. Also, Orr *v.* Badger, before Justice Sprague, February, 1845.

It would be a little strange, that a recovery under the new and amended

the application at the patent office, it enures to his benefit and becomes his act, and he is properly made a party in any suits brought for infringement within the territory covered by the assignment.[1] But the assignee or grantee, under the original patent, does not acquire any right under the extended patent, which may be obtained pursuant to the 18th section of the act of 1836, unless such right be expressly conveyed to him by the patentee.[2] But assignees, who were in the use of a patented

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and corrected specification, should be, as is another argument for the defendant, any stronger evidence of right than a recovery, even when the specification was more objectionable. Independent of these circumstances, it is averred in the bill as amended, that Washburn and Brown have adopted and approved of the new specification; and that they claim under their contract, and to the extent of it, all the rights conferred by it on the patentee. There is, moreover, a clause in the act of July 4, 1836, ch. 357, § 13, which seems to have been designed to dispose of such objections; and though it does not mention contracts or assignments, it is quite broad and comprehensive enough to cover them. It is, "the patent, so reissued together with the corrected descriptions and specifications, shall have the same *effect and operation in law* on the trial of all actions hereafter commenced for causes subsequently occurring, as though the same had been originally filed in such corrected form before the issuing of the original patent."

It would be very doubtful, also, whether a misjoinder of parties as plaintiffs in an application of this kind, could defeat a prayer for an injunction not to use a machine in which any of them were interested. At law, such a misjoinder could be objected to only in abatement, as the act sounds *ex delicto* (1 Ch. Pl. 75;) and probably it could not be objected to at all in equity, though in the final judgment, of course it would be entered up in favor of those alone who appeared to have some right and interest to be protected.

As the claims of two of the plaintiffs, however, have been already proved and established in several recoveries before the new letters; and the contract now offered, under which they claim, confers on them a right to use fifty planing machines within certain territory, including this city; and there is a covenant by the grantees of that right not to sell to different persons liberty to use others within those limits, during the time of Washburn and Brown's contract, their interest within them would seem to be sufficiently exclusive to make them properly plaintiffs, and entitled to judgment."

[1] Woodworth *v.* Stone, 3 Story's R. 749.

[2] Woodworth *v.* Sherman, 2 Story's R. 171; Wilson *v.* Rousseau, 4 Howard, 646.

machine at the time of the renewal, have still a right to use *the machine*, under the clause of the statute which declares that "the benefit of such renewal shall extend to assignees and grantees of the right to use the thing patented to the extent of their respective interests therein." [1]

§ 194. When a disclaimer is to be filed, under the 7th and 9th sections of the Act of 1837, an assignee of the whole patent will be the proper party to file it; and if the patent has been previously assigned in part, it has been held that the disclaimer will not operate to the benefit of such an assignee in any suit by him, at law or in equity, unless he joined in the disclaimer.[2]

§ 195. The distinction between an assignment and a license relates to the interest in the patent, as distinguished from the right to use the thing patented, or to practise the invention. An assignment is a grant in writing of the whole or a part of the exclusive right vested in the patentee by the patent; and such a part may be designated as an undivided part of the whole patent, extending wherever the patent extends, or as a grant of the exclusive right within a particular district. Each of these grants may carry with it the right to grant to others the power of making and using the thing patented, and in no degree diminishes the right of the patentee; it does not *per se* carry the right to grant to others the power of exercising the invention, although it may involve the right of selling the specific thing made, with the incidental right of using it. Thus when the patentee sells to another a patented machine, made by himself, or permits such person to make the machine, the party thus authorized becomes a licensee, with the right of selling the machine, which carries with it the right of using it. But that party has no interest in the patent; he cannot author-

[1] Wilson *v.* Rousseau, *ut supra.*

[2] Wyeth *v.* Stone, 1 Story's R. 273.

ize others to make the machine; nor does the permission extended to him diminish in any degree, the exclusive right of the patentee to make or to authorize others to make the patented machine. So, where the subject of the patent is a compound or composition of matter, if the patentee authorizes another to make and sell the article, that party becomes a licensee, with the right of selling the article he may make to others, to be used by them, in the way of consumption, for the purposes for which it is intended, but he has no interest in the patent, and no power to grant to others any portion of the exclusive right of making the thing, which is vested in the patentee.[1]

§ 196. Upon this distinction it may often be necessary to determine whether a particular instrument amounts to an assignment, or only to a license. Our statute seems to assume and proceed upon the clear distinction, that every grant which embraces the exclusive right under the patent, either as to a part or the whole, is an assignment; and it requires such grants to be recorded. The test to be applied, therefore, is, whether the instrument vests in the grantee the exclusive right, either for the whole country, or for a particular district, of making and using the thing patented, and of granting that right to others. If it does so, it is an assignment. But if it merely grants a right to make, use, and sell the thing patented, whether in limited or unlimited quantities, without making that right exclusive, it is a license. Thus, where the patentee granted "the right and privilege of making, using, and selling the friction matches," being the thing patented, and the right "to employ in and about the manufacture, six persons, and no more, and to vend said matches in any part of the United States," with a proviso that nothing herein contained should prevent or restrict the patentee from "making and vending the same, or of selling and conveying

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[1] Brooks *v.* Byam, 2 Story's R. 525, 538, 539, 542. In this case Mr. Justice Story held that the true construction of the statute is, that a license is not required to be recorded.

similar rights and privileges to others," with a further proviso that the grantee "shall not manufacture the said matches in any place within forty miles of M.;" it was held that this was a license or authority to make and vend the matches, without any exclusive right of making them, and consequently did not require to be recorded under the statute.[1] The same would be true of a grant to make and use a certain number of patented machines, in a particular place; but if the covenant were that the grantee might make and use ten machines, and that he should have the exclusive right of making and using the machines in a particular district, limiting him to ten, it seems that it would be an assignment, provided the grantee were authorized to grant to others the right to make and use any of the ten machines.[2] In such a case as this, the patentee would have limited the exercise of his own privilege to ten machines, and would have granted the whole of his privilege, as he had seen fit to limit it, to the grantee, who would thus have acquired an interest in the patent. But if the parties to such an instrument were mutually to agree to open the subject of the contract again, the patentee might enlarge the exclusive privilege indefinitely as to the quantity of machines; but the relations of the parties would still be those of assignor and assignee, as long as the exclusive right should be vested in the grantee.

§ 197. Still, if the grant of an exclusive right to work under the patent appears, upon the tenor of the whole instrument, to have been intended by the parties to operate as a license and not as an assignment, it seems that it should be so construed; and such an intention will be evinced by provisos for determining the license and by the reservation of a rent or per centage on the gross sales or manufactures, instead of granting an interest in the profits of working the patent.[3] But whether such an instrument,

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[1] Brooks *v.* Byam, *ut supra*.

[2] Woodworth *v.* Wilson, 4 How. 712.

[3] Protheroe *v.* May, Webs. Pat. Cas. 415. In this case the Court of Ex-

conferring the exclusive right for a particular district, would amount to an assignment, under our statute, or to such a grant as requires to be recorded, will further depend, it would seem, upon the fact of their being a right vested in the grantee to grant to others the "right to make and use the thing patented."

§ 198. Whether a license is assignable must depend upon its terms. A mere license to the party, without mentioning his *assigns*, is of course nothing more than the grant of a power, or the dispensation with a right or remedy, and confers a personal right upon the licensee which is not transmissible to any other person. It seems, however, that the use of the word *assigns*, in the granting part of such an instrument will not necessarily operate to make a license assignable, when from the tenor of the whole instrument it appears to have been intended as a personal privilege.[1] But whether a license is assignable or not, as to the entirety of the privilege, it is still more questionable whether it is apportionable, so as to permit the licensee to grant rights to others to work the patent, by subdividing the rights that may have been granted to himself. This question

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chequer, upon a case sent for their opinion by the Vice Chancellor, gave a decided opinion that an exclusive license is no more than a common license, and so it seems to be regarded by our statute, which does not treat the grant as an assignment, requiring to be recorded, unless there is added to the exclusive right of making and using, the right to grant to others to make and use the thing patented. The case of Woodworth *v.* Wilson, 4 How. 712, contains an instrument granting the exclusive right to make and use ten machines in a particular district. The instrument is in form a license for the gross sum of fifteen hundred dollars. The point did not arise whether it ought to have been recorded, nor does the fact appear whether it had been recorded. The question was whether the patentee still retained such an interest as to render him a proper party to a bill in equity with the grantee, brought in the district to which the grant related. The court held that the patentee was properly joined in the suit. There was no grant of the right to grant to others to make and use; but merely a grant authorizing the grantee to "construct and use" ten machines within, &c. This instrument, therefore, I conceive to have been a license, not necessary to be recorded.

[1] Brooks *v.* Byam, 2 Story's R. 525, 544.

arose in a case already referred to, where the patentee of friction matches granted to another party the right to make, use, and sell the friction matches, and "to have and to hold the right and privilege of manufacturing the said matches, and to *employ in and about the same six persons*, and no more, and to vend the said matches in the United States." The licensee afterwards undertook to sell and convey to a third person "a right of manufacturing friction matches according to letters-patent, &c., in said town of A., to the amount of *one right*, embracing one person only so denominated in as full and ample a manner to the extension (extent) of the said one right, as the original patentee." Mr. Justice Story held that every conveyance of this sort must be construed according to its own terms and objects, in order to ascertain the true intent and meaning of the parties; and that in this case, the interest under the license was an entirety, incapable of being split up into distinct rights, each of which could be assigned to different persons in severalty.[1]

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[1] Brooks *v.* Byam, 2 Story's R. 525, 543. The reasoning of the learned judge was as follows: "The other question as to the indivisibility of the license, granted to Brown, involves considerations of more nicety and difficulty. By the agreement between Brown and Brooks, (18th of September, 1837,) it was agreed by Brown to sell and convey unto Brooks "a right of manufacturing friction matches according to letters patent, granted to Phillips, &c., in the said town of Ashburnham, *to the amount of one right*, embracing one person only, so denominated, in as full and ample a manner to the extension of the said one right as the original patentee;" and Brown further agrees "to go to Ashburnham and assist Brooks in learning the art and mystery of manufacturing such friction matches, &c., &c.;" and also, "not to sell any right of manufacturing said friction matches, or of vending the same to any person living, or intending to live, to manufacture or vend, said matches within forty miles of said Ashburnham." The question, then, is, whether the license or privilege granted by the patentee to Brown is not an entirety, and incapable of being split up into distinct rights, each of which might be assigned to different persons in severalty. I do not meddle with another point, and that is, whether the entirety of the license or privilege to Brown was capable of being assigned, though if it were intended to be a personal privilege or license, it might open a ground for argument, notwith-

§ 199. The relations of the patentee and the licensee, with

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standing the use of the word "assigns." That point does not arise in the present case; for here the whole license or privilege is not sold or assigned; but one right, embracing one person only. It has been well said, that the right or license may be transmissible, though not apportionable. There is some obscurity in the language of the instrument, which makes it somewhat difficult to give a definite interpretation to it. Brown's privilege or license is at most to himself and his assigns, and "to employ in and about the manufacturing of the matches six persons and no more." Brown agrees to sell to Brooks "one right, embracing one person." Now the privilege or license to Brown, (assuming it to be capable of assignment) is to him, and to his assigns to employ six persons. Whoever is employed is to be employed by Brown and his assigns. It would seem to be a reasonable interpretation of this language to say, that all of these persons should be employed by one and the same party, either all by Brown, or all by his assigns. But the sub-agreement with Brooks conveys to him one right in severalty, embracing one person, that is, (as I understand it) the right to employ one person in the manufacture of the matches. So that, if this agreement be valid, then the original privilege or license, granted by the patentee to Brown upon this construction, includes six distinct and independent rights, each of which may be granted to a different person in severalty. Now I must confess, that such a construction is open to all the objections stated at the bar. It exposes the patentee to the competition of six different distinct persons, acting in severalty, and independently of each other. It may make an essential difference to the patentee in his own sales, whether the whole of the right or privilege granted to Brown be in the possession of one or more persons, having a joint interest, and of several persons, each having a separate and independent interest. The danger, too, to the patentee of an abuse or excess of the right or privilege granted by him is materially enhanced by the circumstance, that each of the sub-holders may be acting at different places at the same time, and the nature and extent of their claim and use of the right or privilege may be difficult for him to ascertain, and leave him without any adequate remedy for any such excess or abuse of it. The language ought, in my judgment, to be exceedingly clear, that should lead a court to construe an instrument of this sort, granting a single right or privilege to a particular person or his assigns, as also granting a right or license to split up the same right into fragments among many persons in severalty, and thus to make it apportionable as well as transmissible. The patentee might well agree to convey a single right as an entirety to one person to manufacture the matches and employ a fixed number of persons under him, when he might be wholly opposed to apportioning the same right in severalty among many persons."

regard to the validity and extent of the patent, must depend on the terms of the license. The taking of a naked license or permission to work under a patent, does not, without some recitals or covenants amounting to an admission, estop the licensee from denying the validity of the patent, or the fact of infringement, if he is subsequently proceeded against. It is necessary to look into the instrument, and to ascertain what recitals and covenants will deprive a licensee of the defence to which all other persons may resort. If, by his agreement, the licensee has admitted that the process or thing which he uses is the patented process or thing, and he is afterwards proceeded against for not complying with the terms of his agreement, it seems that he will not be at liberty to show, that he did not use the patented thing or process.[1] So, too, if the deed contain recitals or statements amounting to an admission of the validity of the patent, either as to the novelty or utility of the supposed invention, or the sufficiency of the specification, the licensee will be estopped, in an action of covenant for the rent or license dues, to deny the validity of the patent, by setting up anything contrary to the admissions in his deed.[2] In like manner it has been held that a licensee, who has paid an annuity in consideration of a license to use a patent privilege, which he has had the benefit of, but which afterwards turns out to be void, cannot recover back the money he has paid, in an action for money had and received.[3] This is upon the ground that the licensee has had the benefit of what he stipulated for; but if the patent turns out to be invalid, before a payment becomes due, and the license deed contains no admis-

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[1] Baird *v.* Neilson, 8 Cl. & Fin. 726.

[2] Bowman *v.* Taylor, 2 Ad. & E. 278. But if the patentee join issue upon an allegation made by a licensee contrary to an admission in his deed, instead of pleading the estoppel, the deed will be evidence for the patentee, but will not as evidence be conclusive. Bowman *v.* Rostrom 2 Ad. & E. 295.

[3] Taylor *v.* Hare, 1 N. R. 260.

sion of its validity, the licensee may plead the fact in answer to an action of covenant for money reserved by the license.[1]

§ 200. And where there has been no enjoyment by the licensee, who, in an agreement not under seal, has stipulated to pay a certain sum for the right to use a patent privilege, the invalidity of the patent will be a good plea in bar to an action upon the agreement, on the ground of failure of consideration.[2] The competency of a licensee to dispute the validity of a patent is a question which may also arise where the licensee is proceeded against for an infringement, on the ground that he is using the patent contrary to the conditions in his license. If, for instance, a party receives a license to use a patented machine, on condition that he pay a stipulated sum on all the articles which he may manufacture by means of the machine, and after having been put in possession of the machine, he uses it, but refuses to pay the rent or license dues, or to comply with any other condition, he may be enjoined in equity for an infringement. The sole right which such a party can have to use the machine depends on the license; and he can use under the license only by complying with the conditions; so

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[1] Hayne *v.* Maltby, 3 T. R. 438. This case was thus explained by Lord Cottenham, C., in Neilson *v.* Fothergill, Webs. Pat. Cas. 290. "The case of Hayne *v.* Maltby appears to me to come to this, that although a party has dealt with the patentee and has carried on business, yet that he may stop, and then the party who claims to be patentee cannot recover without giving the other party the opportunity of disputing his right, and that if the defendant successfully dispute his right, that notwithstanding he has been dealing under a contract, it is competent to the defendant so to do. That is exactly coming to the point which I put, whether, at law, the party was estopped from disputing the patentee's right, after having once dealt with him as the proprietor of that right; and it appears from the authority of that case, and from the other cases, that from the time of the last payment, if the manufacturer can successfully resist the patent right of the party claiming the rent, that he may do so in answer to an action for the rent for the use of the patent during that year."

[2] Chanter *v.* Leese, 4 M. & W. 295, affirmed in error, 5 M. & W. 698.

that his use aside from the license is an infringement.[1] If, in such a case, the licensee refuses to pay under the license, or sets up, as a reason for not performing any of his covenants, that the patentee has not complied with the terms of the contract on his part, will the licensee be permitted to question the validity of the patent, in any proceeding either at law or in equity, for using the patent without right? This must depend, in the first place, upon the admissions in the license deed. If the deed contains no admission of the plaintiff's title, then the licensee will not be estopped from denying it; but if it contains such admissions, and *a fortiori*, if, after such admissions, the licensee has worked under the license, and has paid the license dues before his refusal, or if he still continues to claim under the deed, and excuses his non-payment by reason of the non-performance of some covenant on the part of the patentee, he will be estopped from denying the validity of the patent, and the sole question will be whether he is liable for an infringement; which will depend upon the validity of his excuse for not paying, on account of the non-performance by the patentee.[2] But, in the second place, if the licensee repudiates the contract altogether, and stands upon the right of every man to use the alleged invention because it is not new, or because the patent is void for some other reason, he foregoes all benefit of the license as a permission to use the invention, and becomes a trespasser. In that event, I conceive that his solemn admission under hand and seal, of the validity of the patent, may still be used against him as an estoppel, both in an action and under a bill in equity for the infringement, unless he can show

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[1] Brooks *v.* Stolley, 1 M'Lean's R. 523; Neilson *v.* Fothergill, Webs. Pat. Cas. 287, 290.

[2] In equity, no alleged failure on the part of the patentee, under the contract of license, will authorize the use, unless the licensee does everything in his power to perform the contract. Brooks *v.* Stolley, *ut supra*. If the license is granted, on condition of a weekly payment, the payment must be made weekly, or the licensee may be enjoined for infringing. *Ibid.*

that he was deceived and misled, otherwise a party might obtain possession of the invention, under a license, and then repudiate the contract at his pleasure.

PART IV.

INFRINGEMENT,

AND

THE REMEDY THEREFOR.

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CHAPTER I.

INFRINGEMENT.

§ 201. The statute grants to the patentee, for a term not exceeding fourteen years, "the full and exclusive right and liberty of making, using, and vending to others to be used, the invention or discovery;"[1] and it gives a right of action for damages, in case of "making, using, or selling" the thing patented.[2] No definition of what is to constitute an infringement is given in the statute; but, of course, there is an infringement of the right, when one "makes, uses, or sells a thing" which another has the exclusive right of "making, using, and vending to others to be used." But what constitutes making, using, and selling, with reference to the various things that may be the subjects of patents, so as to interfere with the exclusive right of the patentee, is left by the statute for judicial interpretation.

§ 202. An infringement takes place whenever a party avails himself of the invention of the patentee, without such variation

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[1] Act of July 4, 1836, c. 357, § 5.

[2] Ibid. § 14.

as will constitute a new discovery;[1] or as it has also been stated, an infringement is a copy made after and agreeing with the principle laid down in the specification.[2] There will be therefore different modes in which patents may be infringed,

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[1] In Walton *v.* Potter, Webs. Pat. Cas. 585, 586, Sir N. C. Tindall, C. J., said to the jury, "Now, according to the general rule upon this subject that is a mere question of fact, and peculiarity for the consideration of a jury, and it will be for you to say, under the circumstances that have been brought in review before you, whether that which has been done by the defendants amounts to such an infringement or not. Where a party has obtained a patent for a new invention, or a discovery he has made by his own ingenuity, it is not in the power of any other person, simply by varying in form or in immaterial circumstances the nature or subject-matter of that discovery, to obtain either a patent for it himself, or to use it without the leave of the patentee, because that would be in effect and in substance an invasion of the right; and therefore what you have to look at upon the present occasion, is not simply whether in form or in circumstances, that may be more or less immaterial, that which has been done by the defendants varies from the specification of the plaintiff's patent, but to see whether in reality, in substance and in effect, the defendants have availed themselves of the plaintiff's invention in order to make that fabric, or to make that article which they have sold in the way of their trade; whether, in order to make that, they have availed themselves of the invention of the plaintiff. The course which the evidence has taken has made it not an immaterial, but, on the contrary, a very necessary inquiry for you upon this first head of investigation, to determine whether the defendant's patent, which they have taken out, is in effect borrowed from the plaintiff's or not, because there can be no doubt whatever that all the defendants have done they have endeavored to clothe themselves with the right of doing by taking out the subsequent patent of 1839. The only evidence of infringement we have had before us is the purchase at the manufactory of the defendants of that little piece of card which was marked with the initials S. G., and there can be no doubt but that that fabric which was so produced in evidence before us, is made on the plan and according to the specification of their own patent, and therefore it will be not immaterial to call to your attention upon this first head of inquiry the specification of the plaintiff's, and next that of the defendant's patent, in order that we may compare them together, and see whether there really is that variation in substance so as to give the denomination of a new discovery to what the defendants have done, or whether they are not following out the invention of the plaintiff, with some variation in the description, which may not allow it the name of a new discovery."

[2] Galloway *v.* Bleaden, Webs. Pat. Cas. 523.

according to their subject-matter. Our statute has made use of the phrases "making, using, and vending to others to be used," to comprehend the exclusive right of the patentee; and consequently the making, using, or selling, are the modes in which that right may be infringed, according to the nature of the subject-matter. We are now, therefore, to consider the meaning of these phrases, as applied to the infringement of the several classes of things which may be the subjects of letters-patent.

§ 203. 1. *As to a machine.* — When a machine is the subject of a patent, the patent covers both the machine itself, the thing invented, and the mode or process of making it. The statute vests in the patentee the exclusive right of making it, the exclusive right of using it, and the exclusive right of vending it to others to be used. It is, therefore, an infringement to make a patented machine, for use or for sale, though in fact it is neither used nor sold;[1] it is an infringement to use it, though made by

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[1] Whittemore *v.* Cutter, 1 Gallis. 429, 433. In this case, Mr. Justice Story said, "Another objection, is to the direction, that the making of a machine fit for use, and with a design to use it for profit, was an infringement of the patent right, for which an action was given by the statute. This limitation of the making was certainly favorable to the defendant, and it was adopted by the Court, from the consideration that it never could have been the intention of the legislature to punish a man who constructed such a machine merely for philosophical experiments, or for the purpose of ascertaining the sufficiency of the machine to produce its described effects. It is now contended by the defendant's counsel, that the making of a machine is, under no circumstances, an infringement of the patent. The first section of the act of 1793, expressly gives to the patentee, &c., "the full and exclusive right and liberty of making, constructing, using, and vending to others to be used," the invention or discovery. The fifth section of the same act gives an action against any person who "shall make, devise, and use *or* sell," the same. From some doubt, whether the language of the section did not couple the making and *using* together to constitute an offence, so that making without using, or using without making, was not an infringement, the legislature saw fit to repeal that section; and by the third section of the act of 17th April, 1800, ch. 25, gave the action against any person, who should "make, devise, use or sell" the invention. We are not called upon to examine the correctness of the original doubt, but the very change in the structure of the

another; and it is an infringement to sell it, whether made by one's self or by another; because the statute vests the exclusive right of doing all these things in the patentee.

§ 204. The doctrine suggested by Mr. Justice Story, that the making of a machine for philosophical experiment, or for the purpose of ascertaining its sufficiency to produce the described effect, would not be an infringement, is founded in the supposition that such a making is not injurious to the patentee. It is true, that the making for the purpose of using becomes directly injurious to the patentee, because it deprives him of a purchaser of that which he alone is authorized to construct and sell; and it is also true, that when the machine is made by one not the patentee, for the mere purpose of experimenting on the sufficiency of the specification, no profits are taken away from the patentee. There is therefore a difference, undoubtedly, in the tendency of the two acts; but it is not quite clear, that the egislature meant to recognize this difference, or that they used the words "make, use," &c., in any other than their ordinary sense. The prohibition is express, that no other person shall "make"; and that no other person shall "use"; and Mr. Justice Washington held that the motive of testing the practical

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sentence affords a strong presumption, that the legislature intended to make every one of the enumerated acts a substantive ground of action. It is argued, however, that the words are to be construed distributively, and that "making" is meant to be applied to the case of a *composition* of matter, and not to the case of a machine. That it is clear, that the use of certain compositions, (as patented pills,) could not be an infringement, and unless making were so, there would be no remedy in such cases. We cannot feel the force of this distinction. The word "making" is equally as applicable to machines, as to compositions of matter; and we see no difficulty in holding that the using or vending of a patented composition is a violation of the right of the proprietor. It is farther argued, that the making of a machine cannot be an offence, because no action lies, except for *actual damage*, and there can be no actual damages, or even a rule for damages, for an infringement by making a machine. We are however of opinion, that where the law gives an action for a particular act, the doing of that act imports of itself a damage to the party. Every violation of a right imports some damage, and if none other be proved, the law allows a nominal damage."

utility of a machine was no answer to a charge of infringement by having "used" it.[1] But it was held by Mr. Justice Story that the making of a patented machine is an infringement only when it is made for use or for sale, and the doctrine seems to be the same in England.[2] The test is, whether the party made the machine with an intent to infringe the patent right, and deprive the owner of the lawful rewards of his discovery.[3]

§ 205. It is said that there may be a constructive using of a patented machine; as, if a person were to make a machine, in violation of the right of the patentee, or purchase it of one who had so made it, and then hire it out to another person for use, he might, under some circumstances, be held responsible for using it. There is a case, where the plaintiff was the patentee of a machine for making watch-chains, and it appeared that the defendant had made an agreement with one C. to purchase of him all the watch-chains, not exceeding five gross a week, which C. might be able to manufacture within six months, and C. had agreed to devote his whole time and attention to the manufacture of watch chains, and not to sell or dispose of any of them, so as to interfere with the exclusive privilege secured to the defendant of purchasing the whole quantity which it might be practicable for C. to make; and it was proved that the machine used by C. with the knowledge and consent of the defendant, in the manufacture, was the same with that invented by the plaintiff, and that all the watch-chains thus made by C. were delivered to the defendant according to the contract; the Supreme Court of the United States held that if the contract were real and not colorable, and if the defendant had no other connection with C. than that which grew out of the contract, it

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[1] Watson v. Bladen, 4 Wash. 583.

[2] In Jones v. Pearce, Webs. Pat. Cas. 125, Patteson, J. said in reply to a question by the jury whether there was any evidence of the defendant having used or sold the wheels. — "The terms of the patent are, 'without leave or license make,' &c.; now if he did actually make these wheels, his making them would be a sufficient infringement of the patent, unless he merely made them for his own amusement, or as a model."

[3] Sawin v. Guild, 1 Gallis. 485, 487.

did not amount to a "using" by him of the plaintiff's machine; but that such a contract, connected with evidence from which the jury might legally infer, either that the machine which was to be employed in the manufacture of the patented article was owned wholly or in part by the defendant, or that it was hired by the defendant for six months, under color of a sale of the articles to be manufactured with it, and with intent to invade the plaintiff's patent right, would amount to a breach of his right.[1]

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[1] Keplinger *v.* De Young, 10 Wheaton, 358, 363. Washington, J., delivering the judgment of the Court, said, "The only question which is presented by the bill of exceptions to the consideration of this Court is, whether the Court below erred in the instruction given to the jury; and this must depend upon the correct construction of the third section of the Act of Congress, of the 17th of April, 1800, ch. 179, which enacts 'that where any patent shall be granted, pursuant to the Act of the 21st of February, 1793, ch. 156, any person without the consent of the patentee, his executors, &c. first obtained in writing, shall make, devise, use, or sell, the thing whereof the exclusive right is secured to the said patentee by such patent, such person so offending shall forfeit and pay to the said patentee, a sum equal to three times the actual damage sustained by such patentee,' &c.

The contract, taken in connection with the whole of the evidence stated in the bill of exceptions, if the same were believed by the jury, formed most certainly a strong case against the defendant, sufficient to have warranted the jury in inferring, either that the machine which was to be employed in the manufacture of watch-chains was owned in whole or in part by the defendant, or that it was hired to the defendant for six months, under color of a sale of the articles which might be manufactured with it, and with intent to invade the plaintiff's patent right. Whether the contract, taken in connection with the whole of the evidence, does or does not amount to a hiring by the defendant of the machine, or the use of it for six months, is a point which is not to be considered as being decided either way by the court. The bill of exceptions does not call for an opinion upon it.

But the contract taken by itself, amounted to no more than an agreement by the defendant to purchase at a fixed price, all the watch chains not exceeding five gross a week, which Hatch and Kirkner might be able to manufacture in the course of six months, with any machine they might choose to employ; and an agreement on the part of Hatch and Kirkner, to devote their whole time and attention to the manufacture of the chains, and not to sell or dispose of any of them, so as to interfere with the exclusive privilege secured to the defendant, of purchasing the whole quantity which it might be practicable for them to make.

§ 206. It seems to be in accordance with the doctrine of this case, to consider that a using of a machine is to be taken as

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If this contract was real, and not colorable, which is the obvious meaning of the instruction, and the defendant had no other connection with H. & K. in regard to these chains than what grew out of it, it would, in the opinion of the court, be an extravagant construction of the patent law, to pronounce that it amounted to a breach of the plaintiff's patent right, by fixing upon the defendant the charge of having used the plaintiff's machine. Such a construction would be highly inconvenient and unjust to the rest of the community, since it might subject any man who might innocently contract with a manufacturer to purchase all the articles which he might be able to make within a limited period, to the heavy penalty inflicted by the act, although he might have been ignorant of the plaintiff's patent, or that a violation of it would be the necessary consequence of the contract. It might possibly extend farther, and affect contracts express or implied, though of a more limited character, but equally innocent, as to which, however, it is not the intention of the court to express any opinion, as this case does not call for it.

This cause was argued by the plaintiff's counsel, as if the opinion of the court below had been given upon the whole of the evidence. But this was not the case. No instruction was asked for but by the defendants counsel, and that was confined to a single part of the case, the connection between the defendant and H. & K., in regard to the watch chains which the latter bound themselves, by their contract, to manufacture and deliver to the former. If the jury had been of opinion, upon the whole of the evidence, that the contract was not a real one, or that that instrument did not constitute the sole connection between those parties, or that the transaction was merely colorable, with a view to evade the law, the jury were not precluded by the instruction from considering the plaintiff's patent right as violated, and finding a verdict accordingly.

Had the plaintiff's counsel thought proper to call upon the court for an opinion and instruction to the jury, upon any points arising out of the whole, or any part of the evidence, it would have been their duty to give an opinion upon such points, leaving the conclusion of fact from the evidence to be drawn by the jury. But this course not having been pursued, this court can take no notice of the evidence, although spread upon the record, except so far as it is connected with the single point upon which the opinion, which is excepted to, was given. As to the residue of that opinion, that 'the legal aspect of the case would not be changed, although the defendant might, on any occasion, have supplied, at the cost of H. & K., the wire from which the chains so manufactured were made,' it is quite as free from objection as the preceding part of it, since it stands on precisely the same principle."

proved, either when the party charged has used it himself or has employed others to use it for him, or has profited by the use of it.[1]

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1 Woodworth *v.* Hall, 1 Woodb. & M. 248, 251. In this case, Mr. Justice Woodbury said, "There has been no evidence whatever offered in this case of any use of the planing machine by Isaac Hall since his license expired, except what is contained in the affidavit of Aaron Pratt. This witness did not see him use it; but made a bargain with him about the 15th of July, 1845, to plane for the witness certain boards at the ordinary price, intending to set off the amount against rent due from said Isaac.

Clement Hall, however, was present, and said, 'we can plane them for you,' and the work was done; but the witness does not say by whom, nor whether in fact the compensation for it was made to Isaac.

Against this, is the answer of Isaac, responsive to the bill, and sworn to, denying that he had ever used the machine since his license expired; and this agrees with Clement's assertion in his answer, that the machine was used by him alone. The facts testified by Pratt might, standing alone, be sufficient to justify an inference, that Isaac had planed the boards and used the machine.

In such cases, it may be, that any workman on the machine, though not interested in it, is liable to be restrained in order to prevent evasions, by treating all as principals who are aiding.

It is a common case, also, that if one does not in person perform the work, but procures another to do it for his advantage on a machine owned by himself, he can still be restrained, and is estopped from denying, *qui facit per alium, facit per se.* Possibly, too, if one hires another to do work on such a machine, he may be restrained. 4 Mann. & Grang. 179. But it is not necessary to give a decisive opinion on this, after comparing the evidence with the denial in Isaac's sworn answer.

After that answer thus testified to as true, the probability is, and it is a construction not inconsistent with the veracity of both Pratt and Isaac, that the boards were planed by Clement alone, and on his own contract, or his own assent to the arrangement, and for his own profit. It would seem, also, very easy to produce further evidence of the fact of Isaac's using the machine, or receiving the profits from it, if such was the truth. Until it is produced, the fairest construction of the affidavits and answer are, that Isaac did not work the machine or profit by it. If this construction were not the most reasonable, and did not reconcile what is sworn to in the affidavit and answers, the court would still be compelled to refuse to issue an injunction against Isaac, on the affidavit of Pratt alone, for the want of evidence in it to overcome Isaac's answer. Because something more must be

§ 207. As to the sale of a patented machine, in order to be an infringement of the right, it must be something more than a sale of the materials, either separate or combined; it must be a sale of a complete machine, for use as a machine, which is patented, in order to render the vendor liable for an infringement of the patent by a "sale."[1]

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produced than the evidence of a single witness to overcome an answer under oath, and responsive to the bill. Carpenter *v.* Prov. Wash. Ins. Co. 4 How. 185. Certainly, something more than the evidence of one witness, and he not testifying explicitly that Isaac either owned or worked the machine, or received any of its profits.

But in respect to the liability of Clement to an injunction, the testimony is very different; and notwithstanding the several ingenious objections that have been urged, I have come to the conclusion that one ought to be issued against him."

[1] A sale of the materials of a patented machine by a sheriff, on execution, is not an infringement. Sawin *v.* Guild, 1 Gallis. 485. In this case Mr. Justice Story said, "This is an action on the case for the infringement of a patent right of the plaintiffs, obtained in February, 1811, for a machine for cutting brad nails. From the statement of facts agreed by the parties, it appears, that the defendant is a deputy-sheriff of the county of *Norfolk*, and having an execution in his hands against the plaintiffs for the sum of $567.27 debt, and costs, by virtue of his office, seized and sold, on said execution, the *materials* of three of said patented machines, which were at the time complete and fit for operation, and belonged to the plaintiffs. The purchaser, at the sheriff's sale, has not, at any time since, put either of the said machines in operation; and the whole infringement of the patent consists in the seizure and sale by the defendant as aforesaid. The question submitted to the court is, whether the complete materials, of which a patented machine is composed, can, while such machine is in operation by the legal owner, be seized and sold on an execution against him.

The plaintiffs contend that it cannot be so seized and sold, and they rely on the language of the third section of the Act of the 17th of April, 1800, ch. 25, which declares that if "any person, without the consent of the patentee, his or her executors, &c. first obtained in writing, shall make, devise, use, or *sell* the thing, whereof the exclusive right is secured to the said patentee, such person, so offending, shall forfeit," &c.

It is a sound rule of law, that every statute is to have a sensible construction; and its language is not to be interpreted so as to introduce public mischiefs, or manifest incongruities, unless the conclusion be unavoidable. If the plaintiffs are right in their construction of the section above stated,

§ 208. The sale of the articles produced by a patented

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it is practicable for a party to lock up his whole property, however great, from the grasp of his creditors, by investing it in profitable patented machines. This would undoubtedly be a great public mischief, and against the whole policy of the law, as to the levy of personal property in execution. And upon the same construction, this consequence would follow, that every part of the materials of the machine might, when separated, be seized in execution, and yet the whole could not be, when united; for the exemption from seizure is claimed only when the whole is combined and in actual operation under the patent.

We should not incline to adopt such a construction, unless we could give no other reasonable meaning to the statute. By the laws of *Massachusetts*, property like this is not exempted from seizure in execution; and an officer, who neglected to seize, would expose himself to an action for damages, unless some statute of the *United States* should contain a clear exception. No such express exception can be found; and it is inferred to exist only by supposing, that the officer would, by *the sale*, make himself a wrong doer, within the clause of the statute above recited. But within the very words of that clause, it would be no offence to *seize* the machine in execution. The whole offence must consist in a *sale*. It would therefore follow, that the officer might lawfully seize; and if so, it would be somewhat strange, if he could not proceed to do those acts, which alone by law could make his seizure effectual.

This court has already had occasion to consider the clause in question, and upon mature deliberation it has held, that *the making* of a patented machine, to be an offence within the purview of it, must be the making with an intent to use for profit, and not for the mere purpose of philosophical experiment, or to ascertain the verity and exactness of the specification. (Whittemore *v.* Cutter, 1 Gallis. p. 429.) In other words, that the making must be with an intent to infringe the patent right, and deprive the owner of the lawful rewards of his discovery.

In the present case, we think that a sale of a patented machine, within the prohibitions of the same clause, must be a sale not of the materials of a machine, either separate or combined, but of a complete machine, with the right, express or implied, of using the same in the manner secured by the patent. It must be a tortious sale, not for the purpose merely of depriving the owner of the materials, but of the use and benefit of his patent. There is no pretence, in the case before us, that the officer had either sold or guaranteed a right to use the machine in the manner pointed out in the patent right. He sold the *materials* as such, to be applied by the purchaser as he should by law have a right to apply them. The purchaser must therefore act at his own peril, but in no respect can the officer be responsible for his conduct."

machine, or by a process which is patented, is not an infringement.[1]

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[1] Boyd *v.* Brown, 3 M'Lean's R. 295. "The complainant filed his bill, representing that he is the legal owner of a certain patent right, within the county of Hamilton, in Ohio, for making bedsteads of a particular construction, which is of great value to him; that the defendant, professing to have a right under the same patent, to make and vend bedsteads in Dearborn County, Indiana, which the complainant does not admit, but denies; that the defendant sends the bedsteads he manufactures to Hamilton county to sell, in violation of the complainant's patent; and he prays that the defendant may be enjoined from manufacturing the article, and vending it within Hamilton county, &c.

The defendant sets up in his answer a right duly assigned to him to make and vend the article in Indiana, and that he is also possessed of an improvement on the same; and he denies that the sales in Hamilton county, complained of by the complainant, are made at his instance, or for his benefit. A motion is now made for an injunction, before the case is prepared for a final hearing.

On the part of the complainant, it is contended that, by his purchase of the right to make and vend the article within Hamilton county, he has an exclusive right to vend as well as to make, and that his right is infringed by the sales complained of; that his right is notorious, and is not only known to the defendant, but to all those who are engaged in the sales stated. If the defendant, who manufactures the bedsteads in Indiana, be actually engaged in the sale of them in Hamilton county, it might be necessary to inquire whether this is a violation of the complainant's right. But, as this fact is denied in the defendant's answer, for the purposes of this motion, the answer must be taken as true, and that question is not necessarily involved.

The point for consideration is, whether the right of the complainant is infringed by a sale of the article within the limits of the territory claimed by the complainant. It is not difficult to answer this question. We think that the article may be sold at any and every place, by any one who has purchased it for speculation or otherwise.

There can be no doubt that the original patentee, in selling rights for counties or states, might, by a special covenant, prohibit the assignee from vending the article beyond the limits of his own exclusive right. But in such a case, the remedy would be on contract, and not under the patent law. For that law protects the thing patented, and not the product. The exclusive right to make and use the instruments for the construction of this bedstead in Hamilton county, is what the law secures, under his assignment, to the complainant. Any one violates this right who either makes, uses, or

§ 209. But if the person who sells is connected with the use of the machine, he is responsible as for an infringement; and if a court of equity have jurisdiction of the person, such a vendor may be enjoined, although the machine may be used beyond the jurisdiction of the court.[1]

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sells these instruments within the above limits. But the bedstead, which is the product, so soon as it is sold, mingles with the common mass of property, and is only subject to the general laws of property.

An individual has a patent right for constructing and using a certain flouring mill. Now, his exclusive right consists in the construction and use of the mill; the same as the right of the complainant to construct and use the instruments in Hamilton county, by which the bedstead is made. But can the patentee of the mill prohibit others from selling flour in his district? Certainly he could not. The advantage derived from his right is, or may be, the superior quality of the flour, and the facility with which it is manufactured. And this sufficiently illustrates the principle involved in this motion." See further, Simpson *v.* Wilson, 4 Howard, 709.

[1] Boyd *v.* McAlpin, 3 McLean, 427, 429. In this case, the same learned judge said, "It is insisted that the sale of the thing manufactured by the patented machine is a violation of the patent. But this position is wholly unsustainable. The patent gives "the exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement." A sale of the product of the machine is no violation of the exclusive right to use, construct, or sell the machine itself. If, therefore, the defendant has done nothing more than purchase the bedsteads from Brown, who may manufacture them by an unjustifiable use of the patented machine, still the person who may make the purchase from him has a right to sell. The product cannot be reached, except in the hands of one who is in some manner connected with the use of the patented machine.

There are several patents of mills for the manufacture of flour. Now, to construct a mill patented, or to use one, would be an infringement of the patent. But to sell a barrel of flour manufactured at such mill, by one who had purchased it at the mill, could be no infringement of the patent. And the same may be said of a patented stove, used for baking bread. The purchaser of the bread is guilty of no infringement; but the person who constructed the stove, or who uses it, may be enjoined, and is liable to damages. These cases show, that it is not the product, but the thing patented, which may not be constructed, sold, or used. This doctrine is laid down in Keplinger *v.* De Young, 10 Wheat. 358. In that case watch-chains were manufactured by the use of a patented machine, in violation of the right of

§ 210. The Supreme Court of the United States have decided that an assignment of an exclusive right to use a machine, and to vend the same to others for use, within a specified territory, authorizes the assignee to vend elsewhere, out of that territory, articles manufactured by such machine.[1]

§ 211. 2. *As to a manufacture or composition of matter.* — Assuming that the word is used in our statute to describe the vendible and tangible product of any branch of industry,[2] a patent for a "manufacture" will be infringed by the same acts as a patent for a composition of matter, that is, by making, using, or selling the thing itself.

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the patentee; the defendant, by contract, purchased all the chains so manufactured, and the court held, that, as the defendant was only the purchaser of the manufactured article, and had no connection in the use of the machine, that he had not infringed the right of the patentee.

But in the case under consideration, the bill charges that the defendant, in connection with Brown, constructed the machine patented; and that they use the same in making the bedsteads which the defendant is now selling in the city of Cincinnati. If this allegation of the bill be true, the defendant is so connected with the machine in its construction and use as to make him responsible to the plaintiff. The structure and use of the machine are charged as being done beyond the jurisdiction of the court; but having jurisdiction of the person of the defendant, the court may restrain him from using the machine and selling the product. When the sale of the product is thus connected with the illegal use of the machine patented, the individual is responsible in damages, and the amount of his sales will, in a considerable degree, regulate the extent of his liability.

Whether, if the defendant acts as a mere agent of Brown, who constructed the patented machine, and uses it in Indiana, in making bedsteads, is responsible in damages for an infringement of the patent and may be enjoined, is a question which need not now be determined. Such a rule would, undoubtedly, be for the benefit of Brown, who, according to the bill, had openly and continually violated the patent in the construction and use of the machine. There are strong reasons why the interest of the principal should, by an action at law, and also by a bill in chancery, be reached through his agent. Injunction allowed."

[1] Simpson *v.* Wilson, 4 Howard, 709.

[2] See *Ante*, Part I. ch. 2, § 100.

§ 212. In cases of this kind, however, some difficulty may arise as to what constitutes a using. When the subject-matter is the thing produced, the patent will generally also cover the process of making it; as in the case of a paint, a medicine, a stove, or a fabric of cloth. In these cases, a using of the invention would, in one sense, consist in putting it in practice. But the statute vests the exclusive right to use the thing itself in the patentee, because it is the thing produced which is the subject of the patent. Strictly speaking, therefore, the use of the thing at all, in any form of consumption or application, would be an infringement. But as the purpose of the law is to prevent acts injurious to the patentee, with as little restraint on the public as possible,[1] it may be necessary to consider whether the word "using" is employed in a limited or an unlimited sense.

§ 213. Whether the dictum of Mr. Justice Story that "the using or vending of a patented composition is a violation of the right of the proprietor,"[2] can be considered to extend to every form of use, so as to give the proprietor a right to maintain an action, is worthy of consideration. If a patented medicine is made by one not authorized to make it, and is sold to a person who consumes it, it would be a somewhat inconvenient restraint upon the public to hold that the latter is to be considered as using the invention in the sense of the statute. He cannot know that the article is not made by the true proprietor; the probability is that he intends to purchase the genuine composition, and that he is deceived into supposing that he does purchase it. Still, in strictness, he may be held liable to an action for using the thing itself by consuming it.

§ 214. It would seem, therefore, in regard to all those classes of things which perish in the using, that the use by which they

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[1] *Per* Coleridge J. in Minter *v.* Williams, Webs. Pat. Cas. 135, 138.

[2] Whittemore *v.* Cutter, cited *Ante*, § note

are consumed may be regarded as a violation of the patent right; and that the party may be held responsible for using, who sells or gives to others to be consumed, the article that is the subject of the patent; because both make use of the invention to the injury of the patentee. In such cases, it matters not whether the party makes the article himself, in violation of a patented process, or procures it to be made by others.[1]

§ 215. Where the subject of the patent is a machine, the using it is altogether prohibited by the statute, because it intends to vest in the patentee the full enjoyment of the fruits of his invention, both in the practice of making the machine, and of producing the effect or result intended to be produced by it.

§ 216. Where an order was given to the defendants by a third person to manufacture a patented article, on a model furnished by him, and the order was executed, it was held that the defendants were guilty of an infringement, although, when they began to execute the order, they had no knowledge of the plaintiff's patent.[2]

§ 217. 3. *An Art.* — Where an art is the subject-matter of a patent, the patent will be infringed by exercising or practising

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[1] Gibson *v.* Brand, 4 Man. & Gr. 179, 196. Tindal, C.J. "The breach alleged in the declaration is, that the defendant had 'directly and indirectly made, used, and put in practice the said invention, and every part thereof, and counterfeited, imitated, and resembled the same.' The proof in support of the breach was that an order had been given by the defendant, in England, for the making of silk by the same process as the plaintiffs; which order had been executed in England; and that is enough to satisfy the allegation in the declaration — that the defendant made, used, and put in practice the plaintiff's invention — though the silk was, in fact, made by the agency of others." For the converse of this case, where the defendant infringes by executing an order for another person, see § 216.

[2] Bryce *v.* Dorr, 3 M'Lean, 582. Two of the articles were made after notice of the patent.

the same art, which will constitute a "using" of the invention or discovery.

§ 218. But the great question that arises when an infringement is charged to have taken place is, whether the two things, one of which is said to be an infringement upon the other, are the same, or different. If they are the same, there is an infringement. If they are different, there is not. But what kind and what degree of resemblance constitute the identity which the patent law designates as an infringement, and what kind and what degree of difference will relieve from this charge, are the difficult and metaphysical questions to be determined in each particular case.[1]

§ 219. Learned judges have often laid it down that where two things are the same in principle, the one is an infringement upon the other. This mode of stating the general doctrine on which the fact of infringement depends is not quite satisfactory, because that which constitutes the principle of an invention is very likely to be regarded differently by different minds. Still, there is a sense in which the principle of an invention is undoubtedly to be considered in determining whether an infringement has taken place; because we cannot determine whether there is a substantial identity between two things, without first

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[1] There is a very great dearth of reported cases, in our own books, giving with any detail the facts brought out at the trial, on which the infringement depended. The reporters of the Circuit Courts of the United States seem to have acted on the idea that there is nothing to be reported in a patent cause, unless some question of law is raised on motion for a new trial, or for arrest of judgment, &c.; and then we get the facts, only so far as it is convenient for the court to state them, in deciding the questions raised. This is a great mistake. A careful summary of the evidence given on every important trial for infringement of a patent, including the professional characters and qualifications of the witnesses, together with an accurate description of the plaintiff's and defendant's inventions, the rulings of the court in the progress of the trial, and the charge to the jury, would be of great value.

observing the distinguishing characteristics of the one which is taken as the subject of comparison. But I propose, without rejecting the light of any of the cases in which this language is employed, to inquire whether the fact of an infringement may not be tried by a test more definite, precise, and practical.[1]

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[1] The meaning to be ascribed to the term *principle* of an *invention* or *discovery*, has been thus commented on by different judges. Mr. Justice Washington, in Treadwell *v.* Bladen, 4 Wash. 706, said, "What constitutes form, and what principle, is often a nice question to decide; and upon none are the witnesses who are examined in patent causes, even those who are skilled in the particular art, more apt to disagree. It seems to me that the safest guide to accuracy in making the distinction is, first to ascertain what is the result to be obtained by the discovery; and whatever is essential to that object, independent of the mere form and proportions of the thing used for the purpose, may generally, if not universally, be considered as the principles of the invention."

In Whittemore *v.* Cutter, 1 Gallis. 478, 480, Mr. Justice Story said, "By the principles of a machine, (as these words are used in the statute) is not meant the original elementary principles of motion, which philosophy and science have discovered, but the *modus operandi*, the peculiar device or manner of producing any given effect. The expansive powers of steam, and the mechanical powers of wheels, have been understood for many ages; yet a machine may well employ either the one or the other, and yet be so entirely new, in its mode of applying these elements, as to entitle the party to a patent for his whole combination. The intrinsic difficulty is to ascertain, in complicated cases like the present, the exact boundaries between what was known and used before, and what is new, in the *mode of operation*." In Barrett *v.* Hall, 1 Mas. 447, 470, the same learned judge said, "As to the opinion of skilful witnesses, whether the principles of two machines are the same, no person doubts that it is competent evidence to be introduced into a patent cause. But care should be taken to distinguish what is meant by a principle. In the minds of some men, a principle means an elementary truth, or power, so that, in the view of such men, all machines, which perform their appropriate functions by motion, in whatever way produced, are alike in principle, since motion is the element employed. No one, however, in the least acquainted with law, would for a moment contend, that a principle in this sense is the subject of a patent; and if it were otherwise, it would put an end to all patents for all machines, which employed motion, for this has been known as a principle or elementary power, from the beginning of time. The true legal meaning of the principle of a machine, with reference to the

§ 220. An infringement involves substantial identity, whether that identity is described by the terms, "same principle," same *modus operandi*, or any other. It is a copy of the thing described in the specification of the patentee, either without variation, or with only such variations as are consistent with its being in substance the same thing.[1] What will amount to such a substantial identity cannot be stated in general terms; we can only look to individual cases for illustrations and applications of the general doctrine.

§ 221. If the invention of the patentee be a machine, it will

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patent act, is the peculiar structure or constituent parts of such machine. And in this view the question may be very properly asked, in cases of doubt and complexity, of skilful persons, whether the principles of two machines be the same or different. Now, the principles of two machines may be the same, although the form or proportions may be different. They may substantially employ the same power in the same way, though the external mechanism be apparently different. On the other hand, the principles of two machines may be very different, although their external structure may have great similarity in many respects. It would be exceedingly difficult to contend, that a machine, which raised water by a lever, was the same in principle with a machine which raised it by a screw, a pulley, or a wedge, whatever, in other respects, might be the similarity of the apparatus." See note on the "Principle of an Invention," at the end of this chapter.

[1] In Walton *v.* Potter, Webster's Pat. Cas. 586, Sir N. C. Tindall, C. J. said, "Where a party has obtained a patent for a new invention, or a discovery he has made by his own ingenuity, it is not in the power of any other person, simply by varying in form or in immaterial circumstances, the nature or subject-matter of that discovery, to obtain either a patent for it himself, or to use it without the leave of the patentee, because that would be in effect and in substance an invasion of the right; and, therefore, what you have to look at upon the present occasion, is not simply whether in form or in circumstances, that may be more or less immaterial, that which has been done by the defendants varies from the specification of the plaintiff's patent, but to see whether, in reality, in substance, and in effect, the defendants have availed themselves of the plaintiff's invention in order to make that fabric, or to make that article which they have sold in the way of their trade; whether, in order to make that, they have availed themselves of the invention of the plaintiff."

be infringed by a machine which incorporates in its structure and operation the substance of the invention; that is, by an arrangement of mechanism, which performs the same service, or produces the same effect in the same way, or substantially in the same way.[1]

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[1] Wyeth v. Stone, 1 Story's R. 273, 280. In this case Mr. Justice Story said, "The next point is, whether the ice-machine used by the defendants is an infringement of the patent, or, in other words, does it incorporate in its structure and operation the substance of Wyeth's invention? I am of opinion that it does include the substance of Wyeth's invention of the ice-cutter. It is substantially, in its mode of operation, the same as Wyeth's machine; and it copies his entire cutter. The only important difference seems to be, that Wyeth's machine has a double series of cutters, on parallel planes; and the machine of the defendants has a single series of chisels in one plane. Both machines have a succession of chisels, each of which is progressively below the other, with a proper guide placed at such a distance as the party may choose, to regulate the movement; and in this succession of chisels, one below the other, on one plate or frame, consists the substance of Wyeth's invention. The guide in Wyeth's machine is the duplicate of his chisel plate or frame; the guide in the defendant's machine is simply a smooth iron, on a level with the cutting single chisel frame or plate. Each performs the same service, substantially in the same way."

In Odiorne *v.* Winkley, 2 Gallis. 51, 53, the same learned judge said, "The first question for consideration is, whether the machines used by the defendant are substantially, in their principles and mode of operation, like the plaintiff's machines. If so, it was an infringement of the plaintiff's patent to use them, unless some of the other matters offered in the defence are proved. Mere colorable alterations of a machine are not sufficient to protect the defendant.

The original inventor of a machine is exclusively entitled to a patent for it. If another person invent an improvement on such machine, he can entitle himself to a patent for such improvement only, and does not thereby acquire a right to patent and use the original machine; and if he does procure a patent for the whole of such a machine with the improvement, and not for the improvement only, his patent is too broad, and therefore void. It is often a point of intrinsic difficulty to decide, whether one machine operates upon the same principles as another. In the present improved state of mechanics, the same elements of motion and the same powers must be employed in almost all machines. The lever, the wheel, and the screw, are powers well known; and if no person could be entitled to a patent who used

§ 222. But if the difference between the two machines is not a mere difference of form; if there is a material alteration of

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them in his machine, it would be in vain to seek for a patent. The material question, therefore, is not whether the same elements of motion, or the same component parts are used, but whether the given effect is produced substantially by the same mode of operation, and the same combination of powers, in both machines. Mere colorable differences, or slight improvements, cannot shake the right of the original inventor. To illustrate these positions: suppose a watch was first invented by a person, so as to mark the *hours* only, and another person added the work to mark the minutes, and a third the seconds; each of them using the same combinations and mode of operations, to mark the hours as the first. In such a case the inventor of the second hand could not have entitled himself to a patent embracing the inventions of the other parties. Each inventor would undoubtedly be entitled to his own invention and no more. In the machines before the court, there are three great stages in the operations, each producing a given and distinct effect: — 1. The cutting of the iron for the nail; 2. The griping of the nail; 3. The heading of the nail. If one person had invented the cutting, a second the griping, and a third the heading, it is clear, that neither could entitle himself to a patent for the whole of a machine which embraced the inventions of the other two, and, by the same mode of operation, produced the same effect; and if he did, his patent would be void. Some machines are too simple to be thus separately considered; others, again, are so complex, as to be invented by a succession of improvements, each added to the other. And, on the whole, in the present case, the question for the jury is, whether, taking *Reed's* machine, and *Perkins's* machine together, and considering them in their various combinations, they are machines constructed substantially upon the same principles, and upon the same mode of operation."

One machine is the same in substance as another, if the principle be the same in effect, though the form of the machine be different. In Boville *v.* Moore, Dav. Pat. Cas. 361, 405, Gibbs, Lord C. J. said, "I remember that was the expedient used by a man in Cornwall, who endeavored to pirate the steam-engine. He produced an engine, which, on the first view of it, had not the least resemblance to Boulton and Watt's; — where you looked for the head you found the feet, and where you looked for the feet, you found the head; but it turned out that he had taken the principle of Boulton and Watt's — it acted as well one way as the other; but if you set it upright, it was exactly Boulton and Watt's engine. So, here I make the observation, because I observe it is stated that one acts upwards, and the other downwards; one commences from the bottom and produces the lace by an upward

structure; if they are substantially different combinations of mechanism, to effect the same purpose by means which are really not the same in substance, then the one will not be an infringement of the other.[1]

§ 223. But, in cases where the patent is not for a combination, if the principle is applied in the same way as the patentee has applied it, then the absence of two or three things in the defendant's machine, which are mentioned in the specification,

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operation, the other acts from above, and produces it by an operation downwards, but that, if the principle be the same, must be considered as the same in point of invention."

[1] Lowell *v.* Lewis, 1 Mas. 182, 191. In this case the same learned judge said: "The manner in which Mr. *Perkins's* invention is, in his specification, proposed to be used, is in a square pump, with triangular valves, connected in the centre, and resting without any box on the sides of the pump, at such an angle as exactly to fit the four sides. The pump of Mr. *Baker*, on the other hand, is fitted only for a circular tube, with butterfly valves of an oval shape, connected in the centre, and resting, not on the sides of the pump, but on a metal rim, at a given angle, so that the rim may not be exactly in contact with the sides, but the valves may be. If from the whole evidence the jury is satisfied that these differences are mere changes of form, without any material alteration in real structure, then the plaintiff is entitled to recover; if they are substantially different combinations of mechanical parts to effect the same purposes, then the defendant is entitled to a verdict. This is a question of fact, which I leave entirely to the sound judgment of the jury."

In Gray *v.* James, Peters's Circ. C. R. 394, 397, Mr. Justice Washington said: "What constitutes a difference in principle between two machines, is frequently a question of difficulty, more especially if the difference in form is considerable, and the machinery complicated. But we think it may safely be laid down, as a general rule, that where the machines are subtantially the same, and operate in the same manner, to produce the same result, they must be in principle the same. I say *substantially*, in order to exclude all formal differences; and when I speak of the same result, I must be understood as meaning *the same kind of result, though it may differ in extent. So that the result is the same, according to this definition, whether the one produce more nails, for instance, in a given space of time, than the other, if the operation is to make nails.*"

will not prevent the patentee from recovering for an infringement.[1] It is in relation to this question of substantial identity, that the doctrine of mechanical equivalents becomes practically applicable. This doctrine depends upon the truth that the identity of purpose, and not of form or name, is the true criterion in judging of the similarity or dissimilarity of two pieces of mechanism. The question whether one thing is a mechanical equivalent for another, is a question of fact for the jury, on the testimony of experts, or an inspection of the machines; and it is an inference to be drawn from all the circumstances of the case, by attending to the consideration, whether the contrivance used by the defendant is used for the same purpose, performs the same duties, or is applicable to the same object, as the contrivance used by the patentee.[2] Hence, two things may be

[1] Jones *v.* Pearce, Webs. Pat. Cas. 122, 124. And if the imitation be so nearly exact as to satisfy the jury that the imitator attempted to copy the model, and to make some almost imperceptible variation, for the purpose of evading the right of the patentee, it may be considered a fraud upon the law and such slight variation will be disregarded. Davis *v.* Palmer, 2 Brock. 298, 309.

[2] In Morgan *v.* Seaward, Webs. Pat. Cas. 170, Alderson, B. instructed the jury as follows: "The first defence is, that they did not infringe the patent. That is a question of fact, with regard to which, I do not think it is at all material to recapitulate the evidence, for I understand from an intimation you have thrown out, that you entertain no doubt about it, that is, that the one is an infringement of the other. Upon that subject, the question would be, simply, whether the defendants' machine was only colorably different, that is, whether it differed merely in the substitution of what are called mechanical equivalents for the contrivances which are resorted to by the patentee. I think when you are told what the invention of the plaintiff's really is, you will see that those differences which Mr. Donkin and others point out as existing between the one machine and the other, are in truth differences which do not affect the principle of the invention. Therefore, the two machines are alike in principle, one man was the first inventor of the principle, and the other has adopted it, and though he may have carried it into effect, by substituting one mechanical equivalent for another, still you are to look to the substance, and not to the mere form, and if it is in substance an infringement, you ought to find that it is so. If in principle it is not the same, but really different, then the defendants cannot be said to have

mechanical equivalents for each other under some circumstances, which would not be so under different circumstances. Hence, also, the names as well as the forms of things are of comparatively little importance. The question to be determined is, whether, under a variation of form, or by the use of a thing which bears a different name, the defendant accomplishes in his machine, the same purpose, object, or effect, as that accomplished by the patentee; or whether there is a real change of structure and purpose.[1]

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infringed the patent. You will, however, when you are considering that subject, remember, that when the model of Mr. Stevens's paddles was put into the hands of Mr. Donkin, he said, at first sight, that it was exactly like the plaintiffs'; and so like was it as to induce him to say that it was precisely the same in principle, till I pointed out to him a material difference in it, and then it appeared, that though there was a similarity of execution, there was a real difference in principle, therefore it was not similar to the plaintiffs' wheel, though at first sight it had the appearance of being similar. So you see you ought to look always to the substance, and not to the form." In Webster *v.* Lowther, before Lord Tenterden, the jury, upon the evidence of *sportsmen* that the lock with a sliding bolt was more readily used in the field, particularly in wet weather, than the screw and washer, found that the alteration was a material and useful improvement; and upon evidence *by mechanics*, that a spring in a bolt was the same thing as a bolt sliding in a groove, they found that the defendant had infringed the patent of the plaintiff. Godson on Patents, 232, 233. Here an important advantage was gained, but it was gained by the use of a mechanical equivalent, and consequently the new advantage did not prevent the defendant's lock being an infringement on the plaintiffs'.

[1] Thus, in the old mode of making chains, the different parts of the chain were held together by one branch of the chain being linked within another, or else the different branches were connected together by holes perforated through each, and connected by a pin or screw. Subsequently, a party united these two modes, by inserting one link within the other, and perforating both by a pin. A second inventor then made a chain which united both these principles of support, but in a different manner, by using a piece of metal, *called* a pin, for a totally different purpose, not performing the same duties, or applicable to the same object; and it was held that he was well entitled to a patent for his invention. In the matter of Cutler's patent, Caveat at the Great Seal, Webs. Pat. Cas. 418, 430. In Morgan *v.* Seaward, Webs. Pat. Cas. 167, Sir L. Shackwell, V. C. said, "The question in the

§ 224. If the change introduced by the defendant constitutes a mechanical equivalent, in reference to the means used by the

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case is simply whether the eccentric motion is produced by the adoption of the same combination of machinery by the defendants as the plaintiffs are entitled exclusively to use. Upon reading the specification, it appears that a particular combination, insisted on, is described under the item rods, bent rods, disc, and crank. If Mr. Galloway had been asked, at the time he gave this description, whether he meant the disc should revolve on a crank only, or that it should be made to revolve by any other suitable means, his reply might have been general; but as he has thought proper to specify a crank, the question to determine is, whether the eccentric axis, with a collar in the defendants' contrivance, is the same as a crank in that of the plaintiffs'. The term crank is a relative term, and might have reference to some particular piece of machinery. The arrangement adopted by the defendants is a most important variation from the invention, for instead of weakening the action of the paddle wheel, that is preserved entire, unbroken, and unincumbered. That perpetual vibration or destroying power, as it might be termed, on the outer part of the frame work that supports the wheel, is entirely avoided, and the vibration at the centre of the disc within the wheel is transferred from a part of the machinery least able to bear it to the side of the vessel, that is made strong for the purpose; and although it might be said the action of the rods on one side of the float boards might distort them a little, that inconvenience might be more than counterbalanced by other advantages. The alteration is, therefore, not merely colorable, but *prima facie* a decided improvement by the introduction into a combination of three things of that which is not noticed at all in the specification."

In Gray *v.* Osgood, Peters's Circ. C. R. 394, 398, may be found a clear illustration of the doctrine of mechanical equivalents. Washington, J., said, "In the former [the plaintiff's machine] we find the two jaws of a vice, the one fixed, and the one movable on a pivot at the top, which connects them together. In each of these jaws is fixed a cutter, the use of which is to cut off from the bar of iron as much as will be necessary to form the nail, which, being separated, falls by its own gravity into a die, which holds it by a firm gripe until the head is formed, by what is called the set, or heading die. The power which produces this double operation, is a lever of the first order, acting upon a toggle joint, which compresses the two jaws, and consequently the cutters together, and also the set in such a manner as to head the nail. But the whole is performed by the same movement of the lever.

It is impossible to describe the parts of the defendant's machine, and its operation, without using the same expressions, except that his is inverted, the pivot of the vice being below, and a lever of the second order embracing

patentee, and besides being such an equivalent, it accomplishes some other advantage beyond the effect or purpose accomplished by the patentee, it will still be an infringement, as respects what is covered by the patent, although the further advantage may be a patentable subject as an improvement upon the former invention.

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the jaws with a friction roller, acting on an inclined plane made on the moving jaw of the vice, instead of the lever of the first order, and the toggle-joint. But it is in full proof, that these differences as to the lever and the friction roller, are the necessary consequences of the machine being inverted. After having made this comparison, and ascertained the mode of operation by each machine, connected with the result of each, the jury can find little difficulty in deciding whether they are the same in principle or not.

The witnesses have differed in opinion as to the comparative merit of the toggle joint in Perkins's machine, and the friction roller in Read's. If their operation is precisely the same, the difference in form does not amount to an invention of any kind.

If the friction roller is better than the toggle-joint, which seems to be the opinion of some of the defendant's witnesses, then Read has the merit of having discovered an improvement on Perkins's machine, and no more.

If the jury should be of opinion, that the parts of the two machines which I have noticed are the same in principle, and that each will by the same operation cut and head nails; then it will follow, that the forcing slide, the proximity of the cutters and dies to each other, the balance wheel, and some other additional parts in Read's machine, which give it a great and acknowledged preference over Perkins's, are merely improvements, but do not change the principle of the machine. If improvements only, what is the legal consequence? Most clearly this, and no more: that Perkins, and those claiming under his patent, have no right to use those improvements without a license from the inventor. But on the other hand, neither Read nor any other person, can lawfully use the discovery of Perkins of the principal machine without a license from him. The law wisely and with justice, discriminates between, and rewards the merit of each, by granting an exclusive property to each in his discovery, but prevents either from invading the rights of the other. If then the jury should be of opinion, that the two machines are the same in principle, it is no defence for the defendant's for using Perkins's discovery, that they have improved it, no matter to what extent." So too it is wholly immaterial that the defendant's invention is better than that of the plaintiff, unless there is a substantial difference in principle. Aldon v. Dewy, 1 Story's R. 336, 337.

§ 225. Where the subject-matter of the patent is a manufacture, the same test of substantial identity is to be applied. In many cases of this kind, it will not be by varying in form, or in immaterial circumstances, the nature of the article, or the process by which it is produced, that a party can escape the penalties of infringement. The question will be, whether in reality and in substance the defendant has availed himself of the invention of the patentee, in order to make the fabric or article which he has made. If he has taken the same plan and applied it to the same purpose, notwithstanding he may have varied the process of the application, his manufacture will be substantially identical with that of the patentee.[1]

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[1] Walton *v.* Potter, Webs. Pat. Cas. 585, 607. In this case Erskine, J., said, "then there remains the first plea, by which it is denied that the defendants had infringed the patent of the plaintiff, and that depends upon whether the plan which the defendants have employed, is in substance the same as the plaintiff's, and whether all the differences which have been introduced by them in the manner of making their cards, are not merely differences in circumstances not material, and whether it is not in substance and effect a mere colorable evasion of the plaintiff's patent. The jury, it appears to me, have come to the right conclusion, that this was in effect and substance the same as the plan of the plaintiff. The plaintiff's plan is, the insertion of the teeth through India rubber, giving to the teeth the additional elasticity of the India rubber, beyond what the wire had of itself. The defendant's plan is for the same purpose. The only difference is, that the plaintiff in employing the India rubber, takes a slice either from the original block, as it is imported into this country, or from the improved block as it is used after it has been compressed, and places it upon a piece of holland, for the purpose of keeping the teeth more firmly in their places, and then afterwards placing it on the engine, by nailing that holland on the engine, or taking away the holland, and cementing the India rubber to the cylinder, giving an elasticity to the teeth of the card by the India rubber, which is next to them. The defendant's plan is to saturate a piece of cloth with India rubber dissolved, and then to lay upon the surface a further layer of India rubber on both sides, and then to insert the teeth through the substance of the cloth and the India rubber. But what is the principle upon which this becomes useful to the card, and the person who employs those cards in the carding of wool? Why it is, that there is upon the surface and the substance of the cloth the elasticity of the India rubber; that the India rubber is there in its natural

§ 226. But in regard to another class of cases, it not unfrequently happens, that the sole evidence of infringement consists in the similarity of the articles, without any direct evidence of their having been made by the same process. Similarity in appearance and structure will not of itself always establish an infringement; because the patent, though it covers the manufactured article itself, may be for the process of the manufacture. In such cases, the inference that the same process was used must be drawn from the evidence; and the rule was laid down by Lord Ellenborough, that the similarity of structure of two things is presumptive evidence of their being made in the same way.[1]

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state, having been brought back into its natural state by the evaporation of the material in which it had been first dissolved, for the purpose of first laying it on. The only difference, therefore, is in the mode of laying on the India rubber for the purpose of having it pierced by the teeth. That appears to me not to be a difference in principle, or a matter which so varies the plan of the defendants from the plan of the plaintiff, as to entitle them to call it a new invention, or different from the plaintiff's. It seems to me a mere difference in circumstances not material, and therefore it is an infringement of the plaintiff's right, and the verdict of the jury ought to stand."

[1] Huddart *v.* Grimshaw, Webs. Pat. Cas. 85, 91. This is a very instructive case. The plaintiff's patent was for "a new mode of making great cables and other cordage, so as to attain a greater degree of strength therein, by a more equal distribution of the strain upon the yarns." Pieces of cordage made by the defendant, were put into the hands of the plaintiff's witnesses, and from the fact that the same effect was produced in them, and from the similarity of structure, they gave the opinion that they were made by the same process as the plaintiff's. This was the question at issue, on the point of infringement. The object to be accomplished, the making a stronger rope, was clearly open to the public. Lord Ellenborough said that it had happened to him in the same morning, to give, as far as he was concerned, his consent to the granting of three different patents for the same thing; but the modes of attaining it were all different. But it did not follow that the plaintiff's *method of attaining the object* was open to the public; and therefore the question for the jury was, whether the defendant had used the plaintiff's method, or some other.

§ 227. In such cases, where the object to be accomplished is open to the public, notwithstanding the patent, provided it can be accomplished in several modes, which, as processes, are substantially different, an infringement must be in respect of the process used by the patentee. But unless it appears that the article itself could be produced by another process, constituting an independent discovery, then an infringement may be proved by the making of the article. The burthen of proof is always on the plaintiff, to show that his process has been infringed; and in the absence of direct evidence, the similarity of the effect produced will generally be sufficient to establish an infringement, and if this is aided by evidence of the use of similar apparatus, the presumption of a use of the same process will be still stronger.[1] Or, to state this in other words, where the invention, or subject-matter of the patent, is a manufacture, it is immaterial by what process it is produced, since the infringement must consist in making the same thing, whether by one process or another. But where the invention or subject-matter is the process of making a particular thing, which may or may not be made by more than one process, the inquiry will be whether it has been made by the use of the process covered by the patent. In such cases, the identity of the manufactured article is, with all the other circumstances, competent evidence, from which the jury are to infer that it was made by the process of the patentee; although there may be cases, where, from the nature of the article, this proof would be less strong, according as it appeared to be possible or probable that the article could

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[1] See the preceding note and the case there cited. See also the more recent case of Hall *v.* Boot, Webs. Pat. Cas. 100, 102. Hall's patent was for a new method of singing off the superfluous fibres upon lace, by means of the flame of gas. The evidence to show the infringement, consisted of proof that the defendant had secretly prepared a gas apparatus, similar to that used by the plaintiff, and *that lace left with the defendant to be dressed had been returned in the state to which it would have been brought by the plaintiff's process, and that similar lace had been offered for sale by the defendant.* The plaintiff had a verdict.

be made by more than one process. The burthen of proof of the infringement is upon the plaintiff throughout; and although it does not appear that the article could be made by another process, the jury must still draw the inference, from the identity of the manufacture, if that is all the evidence, or from that and the other evidence, that it was made by the patentee's process.

§ 228. But a much more difficult class of cases arises under those patents where the subject-matter is the application of a principle, by means of a process or method, in order to produce a particular effect. We have already had occasion to consider when such an invention or discovery is the proper subject-matter of a patent. We have seen that under some circumstances, the discovery of a principle may, by application in the arts, be protected by a patent; and we have now to consider how far the proprietor of such a patent may protect himself against the use of the same principle by others; or in other words, what will constitute an infringement of his right.

§ 229. In this inquiry, the first thing to be attended to is the subject-matter of the patent. A clear idea is to be formed of the object of the patent; and provided the specification properly points out what the claim of the patentee is, it is not material in what form his claim is presented, or whether, in form, the patent purports to be for a process or a manufacture. Wherever the real subject covered by the patent is the application of a principle, in arts or manufactures, the question, on an infringement, will be as to the substantial identity of the principle, and of the application of the principle; and consequently the means, machinery, forms, or modifications of matter made use of will be material, only so far as they affect the identity of the application.

§ 230. Thus in Forsyth's patent, the subject-matter was the use and application of detonating powder as priming, for the

explosion of gunpowder; and it was held that whatever the construction of the lock by which the powder was to be discharged, the use of detonating mixture as priming was an infringement.[1] So, too, where the claim of the patentee was for "the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight and the seat act as a counter balance to the pressure against the back of such chair," it was held, that a chair made in any way upon this principle, was an infringement.[2] In like manner, where the principle of the invention was the welding of iron tubes by pressure of the edges of the iron, when heated, without the use of a maundrill, or other internal support, it was held that a variation from the plaintiff's mode of applying the pressure, the application of the principle being the same, was still an infringement.[3]

§ 231. Clegg's patent was for the application of a law of natural science respecting the motion of fluids and solids, and the alternate filling and discharging of a vessel of gas, by means of that application; the object being to obtain an instrument for measuring the quantity of gas supplied to the consumer. The scientific witnesses said, that the moment a practical scientific man had got that principle, he could multiply without end the forms in which it could be made to operate. The instrument used by the defendant was different in form and construction from that used by the patentee; but the application of the principle, by means of a varied apparatus, was the same in both; and it was held an infringement.[4]

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[1] Forsyth's Patent, Webs. Pat. Cas. 95; Forsyth *v.* Riviere, Ib. 97, note.

[2] Minter *v.* Wells, Webs. Pat. Cas. 127, 134.

[3] Russell *v.* Cowley, Webs. Pat. Cas. 459, 462. See the extracts in the note, *ante*, § 79, p. 69.

[4] Cited in Jupe *v.* Pratt, Webs. Pat. Cas. 146. Alderson, B. said, "It was for measuring the quantity of gas that was supplied to every individual, in order that they might not take it without being known. There never was a more instructive case than that; I remember very well the argument put by the Lord Chief Baron, who led that case for the plaintiff, and suc-

§ 232. In Neilson's patent, the invention consisted in the application of hot air to the blowing of furnaces by heating the air between its leaving the blowing apparatus and its introduction into the furnace, in any way, in a close vessel, exposed to the action of heat. The defendant's apparatus for this purpose was confessedly superior to what would be constructed according to the directions in the plaintiff's specification; but it was held to be an infringement.[1]

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ceeded. There never were two things to the eye more different than the plaintiff's invention and what the defendant had done in contravention of his patent right. The plaintiff's invention was different in form — different in construction; it agreed with it only in one thing, and that was by moving in the water, a certain point was made to open, either before or after, so as to shut up another, and the gas was made to pass through this opening; passing through it, it was made to revolve it; the scientific men, all of them, said, the moment a practical scientific man has got that principle in his head he can multiply without end the forms in which that principle can be made to operate. The difficulty which will press on you, and to which your attention will be called in the present case, is this; you cannot take out a patent for a principle; you may take out a patent for a principle coupled with the mode of carrying the principle into effect, provided you have not only discovered the principle, but invented some mode of carrying it into effect. But then you must start with having invented some mode of carrying the principle into effect; if you have done that, then you are entitled to protect yourself from all other modes of carrying the same principle into effect, that being treated by the jury as piracy of your original invention. But then the difficulty that will press on you here is, that on the evidence there does not appear to have been any mode of carrying the principle into effect at all invented by you."

[1] Neilson *v.* Harford, Webs. Pat. Cas. 310. Parke, B. said to the jury, "If the specification is to be understood in the sense claimed by the plaintiffs, the invention of heating the air between its leaving the blowing apparatus and its introduction into the furnace, in any way, in any close vessel, which is exposed to the action of heat, there is no doubt that the defendant's machinery is an infringement of that patent, because it is the use of air which is heated much more beneficially, and a great improvement upon what would probably be the machine constructed by looking at the specification alone; but still it is the application of heated air, heated in one or more vessels between the blowing apparatus and the furnace, and, therefore, if it should turn out that the patent is good, and the specification is good, though unquestionably what the defendants have done is a great improvement upon what

§ 233. These cases show that when a party has invented some mode of carrying into effect a law of natural science, or a rule of practice, it is the application of that law or rule which constitutes the peculiar feature of his invention; that he is entitled to protect himself from all other modes of making the same application; and consequently, that every question of infringement will present the question, whether the different mode, be it better or worse, is in substance an application of the same principle. The substantial identity, therefore, that is to be looked to, in cases of this kind, respects that which constitutes the essence of the invention, viz., the application of the principle. If the mode of carrying the same principle into effect, adopted by the defendant, still shows only that the principle admits of the same application in a variety of forms, or by a variety of apparatus, the jury will be authorized to treat such mode as a piracy of the original invention. But of course where the variations adopted by the defendant show that the application of the principle is varied, that some other law or rule of science, or of practice, is made to take the place of that which the patentee claims as the essence of his invention, then there will be no infringement, but a substantial invention.[1]

§ 234. And this brings us to the consideration of another test of the fact of infringement, viz., that which shows on the part of the defendant a substantive invention sufficient to support a patent, as for a new thing.

§ 235. There may be many different modes of obtaining the same object, and consequently if, after a patent has been obtained for a particular thing, another party, without borrowing from that patent, has invented a new mode of accomplish-

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would be the machinery or apparatus constructed under this patent, it appears to me that it would be an infringement of it." See, also, the observations of the Lord Justice Clerk Hope, cited *ante*.

[1] See the cases cited, *Ante*, Part I., Ch. II.

ing the same object, he will be entitled to a patent for his discovery.[1] The fact that a party is entitled to a patent for a substantive invention, becomes a test of his infringement of a prior patent, in this way. He cannot have become entitled to a patent without the invention of something material and new, that goes to the essence and substance of the subject-matter. If what he has done is only to make a variation in certain particulars, which do not affect the principle of the invention, the subject-matter remains the same, notwithstanding such variation. But if he has produced a new subject-matter, whether it be in the mode of accomplishing a common object, or in the object itself, he has not infringed upon the subject-matter of another which was materially and essentially different.

§ 236. The application of this test is seen in a striking manner in the facts of a recent English case. The plaintiff had obtained a patent for "an invention of improvements in cards, for carding wool, cotton, silk, and other fibrous substances, and for raising the pile of woollen cloths." In his specification, he stated his invention to consist in "the application and adaptation of caoutchouc or India rubber as a substitute for the fillets

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[1] Sir N. C. Tindall, C. J. in Walton *v.* Potter, Webs. Pat. Cas. 590, thus states the general principle, "Now there can be no doubt whatever that, although one man has obtained a patent for a given object, there are many modes still open for other men of ingenuity to obtain a patent for the same object; there may be many roads leading to one place, and if a man has, by dint of his own genius and discovery after a patent has been obtained, been able to give the public, without reference to the former one, or borrowing from the former one, a new and superior mode of arriving at the same end, there can be no objection to his taking out a patent for that purpose. But he has no right whatever to take, if I may so say, a leaf out of his neighbor's book, for he must be contented to rest upon his own skill and labor for the discovery, and he must not avail himself of that which had before been granted exclusively to another; and, therefore, the question again comes round to this — whether you are of opinion that the subject-matter of this second patent is perfectly distinct from the former, or whether it is virtually bottomed upon the former, varying only in certain circumstances, which are not material to the principle and substance of the invention."

or sheets of leather that were commonly used in the construction of ordinary cards, and thus giving a superior elasticity and durability to cards;" and in describing the mode of preparing the article, stated that "the regularity of distance and uniformity of the dents or teeth of the cards were found to be better preserved by a piece of linen commonly called brown holland, or other like cloth, well glazed and cemented on to the back of the caoutchouc or India rubber;" that the cloth so placed rendered the action of the dents or teeth less uncertain in their elastic movements; that the cloth so cemented to the India rubber or caoutchouc was to be affixed to the cylinder or board of the ordinary carding engine by nails, but if it was to be affixed by cementing, (which he recommended as the best mode of applying the cards,) then it was desirable to remove the cloth;" and he then proceeded to show the ordinary mode of pricking or piercing holes for the reception of the dents or teeth, the mode of cutting the India rubber, &c. The defendants subsequently obtained a patent also for "an improvement or improvements in cards for carding various fibrous substances, part of which improvements may be used as a substitute for leather;" and in their specification they stated their invention to consist in the manufacture of a new material or substance for receiving the wire teeth, which they described to be a woven fabric of a peculiar construction, soft and porous, saturated with a solution of India rubber by being repeatedly passed through it, and then dried and submitted to pressure; the object being to render the fabric so dealt with "extremely elastic in the direction of the thickness of the fabric, so as to impart, as it were, elasticity to the wire teeth when set."

§ 237. The question as to the infringement was, whether the defendants had added anything material, not covered by the plaintiff's patent, which could be considered as constituting a subject-matter distinct from that of the plaintiffs. It appeared that the difference between the article manufactured under the plaintiff's patent, and that under the defendant's patent,

which was complained of as an infringement, was, that in the former the caoutchouc or India rubber was cemented in slices cut from the solid block to linen cloth, or cloth made of linen and cotton, in the manner described in the plaintiff's specification, and that the latter consisted of cloth of a peculiar fabric saturated or impregnated by passing it through a liquid composed of caoutchouc or India rubber dissolved in naptha or oil of turpentine and highly rectified coal tar oil, and afterwards drying and submitting it to pressure. The plaintiff's evidence tended to show that the article made by the defendants was a colorable imitation of that made under the plaintiff's patent; the cloth being merely placed in the centre between two strata of India rubber or caoutchouc, instead of at the back, and the India rubber, though applied in solution or in the form of a cement, being capable of being reproduced by evaporation of the solvent, and the principle and the result of both methods being the same, viz., the acquisition of an increased elasticity, though the modes of attaining that result were somewhat different. It was also sworn, that, for the purpose of the plaintiff's patent, caoutchouc or India rubber might be used either in the state in which it is imported, or in a manufactured state, that is, dissolved by certain known solvents, and afterwards by evaporation of the solvents, restored to solid blocks; but that, if free from air-holes, (in which state it was *possible* to obtain it,) it was more desirable to have it in its natural state, its elasticity being somewhat diminished by the artificial process.

§ 238. On the part of the defendants, several witnesses, as well practical as scientific, were called, who stated that the principle of the manufactures respectively described in the specifications of the plaintiff and defendants, was essentially different, as well in the materials used and the mode in which they were put together, as in the operation or result of their combination; the one process being wholly mechanical, the other strictly chemical, and the effect of the former being to give *elasticity*, and of the latter to give strength and *flexibility* or

pliancy, but imparting only a very slight additional elasticity to the card; that the proportion which the India rubber bore to the cloth as used by the plaintiff, was generally about three to one, whereas the proportion of India rubber solution used by the defendants was from twenty to forty per cent. only; and that India rubber as imported was wholly unfit for the purpose described in the plaintiff's specification, never being sufficiently free from imperfection.

§ 239. Upon the issue of not guilty, the jury found a verdict for the plaintiff, thereby establishing that the defendant's card was an infringement of the plaintiff's, both employing the elasticity of caoutchouc next the teeth, and the defendant's practising by a circuitous mode that which falls within the claim of the plaintiff's patent.[1]

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[1] Walton *v.* Potter, Webs. Pat. Cas. 585, 597; 4 Scott's N. R. 91. On the application for a new trial, Maule, J. said, "With respect to the issue of not guilty, in order to determine whether or not the verdict has been correctly found for the plaintiff on that issue, it is necessary to consider what is the subject of the defendant's patent; for it is quite clear that what the defendants have done they claim to do under their patent. By their specification the defendants claim to be the inventors of a new material for forming the backs of cards; and they describe the mode of preparing it thus, viz., 'by repeatedly passing a woven fabric of a peculiar construction through, and saturating it with, a solution of caoutchouc or India rubber, and then drying it in order to evaporate the solvents, and leave the fabric impregnated and coated with caoutchouc or India rubber, and afterwards submitting it to pressure;" and the object they describe as being to render the fabric so dealt with, 'extremely elastic in the direction of the thickness of the fabric, so as to impart, as it were, elasticity to the wire teeth when set.' That is, in effect, producing by a circuitous process a cloth with a layer of caoutchouc or India rubber on each side of it, so as to give a great degree of elasticity to the basis of the dents or teeth of the card. The plaintiff, by his specification, claims the exclusive right of making cards with caoutchouc or India rubber, as the fillet, or sheet, or medium in which the dents or teeth are to be set; the object being, like that of the defendants, the attainment of a superior degree of elasticity and durability; and in describing his mode of attaining that object, he states that he inserts the wire dents or teeth in a foundation, or fillet of caoutchouc or India rubber — a slice of India rubber

§ 240. But, if the defendants, in this case, could have succeeded in showing that the materials of which they made their cards, and the mode in which they were put together were different from the materials and method of construction used by the plaintiff; if they could have satisfied the jury that the difference expressed by saying that the one process was mechanical and the other chemical, was a real and substantial, and not a colorable difference; then they would, notwithstanding the former patent of the plaintiff, and notwithstanding that the objects of both were the same, have appeared to be the authors of a substantive invention, because they would have produced a distinct subject-matter, new in all material respects, of a useful character, and therefore capable of supporting an independent patent. But it appeared that the plaintiff's patent covered the use of India rubber combined with cloth, as a fillet or sheet, for the backs of cards, in which to insert the teeth, in order to accomplish certain purposes; and that the mode in which the defendants brought these same materials into combination, for the same purposes, was only a circuitous mode of doing what the plaintiff had done, and therefore that they had produced nothing new, material to the principle and substance of the invention.

§ 241. On the other hand, where the plaintiff had a patent

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in its natural state — and that with a view to preserve the regularity of distance and uniformity of the dents or teeth, and to render their action less uncertain, he cements to the back of the caoutchouc or India rubber a piece of brown holland or other like cloth. The plaintiff does not confine his claim to using India rubber by means of slicing it; he claims the exclusive right of making cards, by fixing the dents or teeth in India rubber, using for that purpose cloth, some texture of linen or cotton. In some instances he says, the cloth may be removed. That does not, in point of fact, make it less a part of the process, by which he applies cloth, for the putting the dents into the layer of India rubber. If that be so, I think it is evident the defendants claim to do a thing falling within the generality of the plaintiff's claim. Taking that to be so, the evidence is abundant to justify the jury in finding; and it seems to me to require them to find for the plaintiff." See also the observations of Erskine, J. cited *ante*.

for producing an effect in the manufacture of iron, said to be altogether new, by a mode or process, or series of processes unknown before, it being for a combination of processes altogether new, leading to one end; and the defendants had used the same ingredients, but in different proportions, which constituted a mode of working essentially different from that pointed out in the specification, it was held that there was no infringement. The plaintiff's invention in this case consisted in rendering available the slags or cinders produced in the manufacture of iron; and also in the use and application of lime, subsequent to the blast furnace, in order to prevent the quality called "cold short;" and his specification pointed out the proportion of slags, mine rubbish, coke and limestone, to be used for the production of the effect. To prove the infringement, a witness in the employ of the defendants was called, who stated that he had seen the plaintiff's specification; that since the date of the patent the defendants preserved cinders, which they had not done before, and produced pig-iron, by mixing them with mine rubbish, and that in the subsequent processes they applied quick-lime to prevent the iron from being "cold short." But he stated that the defendants did not work by the plaintiff's specification, but used very different proportions, viz. lime in the refinery furnace in about the proportion of one hundred and twentieth part to the whole charge of pig-iron, and that they used none in the puddling furnace, and that the defendants had used slags in the puddling furnace for years before the date of the patent. He also proved that the proportions of mine rubbish, as laid down in the specification, were not essential to the success of the process; that the defendants had been in the habit of varying those proportions, and that they once entirely omitted mine rubbish, when the result was most successful.[1]

§ 242. Now, this patent was one of that class in which proportions or degrees, when specified as the mode in which a par-

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[1] Hill *v.* Thompson, Webs. Pat. Cas. 225, 232, 233.

ticular effect is to be produced, make a part of the essence of the invention. A discovery may consist in the effect produced by the union of certain ingredients or agents; but if a particular proportion is supposed to be necessary to the effect, and is claimed as entering into the production of that effect, the subject-matter of the patent will be the use of the particular ingredients in that particular proportion; and if the same ingredients in different proportions, or a part of the same ingredients in other proportions, are used by another person to produce a similar beneficial effect, more or less advantageous, that person will have discovered a new subject-matter, and consequently will not have infringed the right of a patentee, whose invention depends on the proportions which he has specified. Accordingly it was held in this case that, the defendant's mode of working being essentially different from the specification of the plaintiff, they had not infringed his patent; and if we apply to the reasoning of the court, the test of a sufficiency of invention on the part of the defendants to support a patent, as for a new discovery, it will be seen that the same facts will lead to that result, which show that the plaintiff's patent had not been infringed.[1]

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[1] Dallas, J., delivering the judgment of the court, said: "To prove the infringement, one witness only was called; and this part of the case depends, therefore, entirely upon his testimony. And, before adverting to the evidence in question, it will be necessary to look to the patent, as far as it relates to this part of the subject. It has not been contended that it is a patent introducing into use any one of the articles mentioned, singly and separately taken; nor could it be so contended, for the patent itself shows the controversy; and if it had been a patent of such a description, it would have been impossible to support it; for slags had undoubtedly been made use of previously to the patent, so had mine rubbish, and so had lime. But, it is said, it is a patent for combinations and proportions, producing an effect altogether new, by a mode and process, or series of processes, unknown before; or, to adopt the language made use of at the bar, it is a patent for a combination of processes altogether new, leading to one end; and this being the nature of the alleged discovery, any use made of any of the ingredients singly, or any use made of such ingredients in partial combination, some of them being omitted, or any use of all or some of such ingredients, in proportions essentially different from those specified, and yet producing a result equally beneficial (if not

§ 243. The superior utility of one thing over another, will sometimes furnish an important test upon this question of iden-

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more so,) with the result obtained by the proportions specified, will not constitute an infringement of the patent.

"It is scarcely necessary here to observe, that a slight departure from the specification, for the purpose of evasion only, would, of course, be a fraud upon the patent, and, therefore, the question will be, whether the mode of working by the defendant has, or has not, been essentially or substantially different. For this, we must look to the evidence of E. Forman; and he being the single witness to the point, by his testimony this part of the case must stand or fall. It may be difficult entirely to reconcile different parts of his evidence with each other, if his answers to the several questions be taken separately and detached; but looking to the result, it seems to be clear. On the part of the plaintiff he proves, that, before the patent was taken out, the defendants were not in the habit of making use of slags, and that his attention being called to the subject by the patentee in the first instance, and then by the patent itself, he has made use of them uniformly since; he has since also, at times, used mine rubbish, and also lime, which last, he also admits, was used to prevent the 'cold short,' which defect he allows was and is thereby prevented. So far, therefore, he proves separate use and occasional combination. He is next asked, as to the proportions mentioned in the patent: 'Did you apply the lime in these proportions?'—his answer is—'I say, no, to that.' 'Have you worked by the specification?'—'No, we did not.' He then explains in what respects they departed from the specification. This is his evidence on the examination-in-chief. On the cross-examination, he says, that the proportions used were very materially different, and that the proportions in the patent are not essential; that it would make no difference to him if he were to be restrained from using these proportions, and that the result would be better obtained by materially departing from them; indeed, by almost losing sight of them altogether. With respect to slags, on reconsideration, he states that the defendant had used slags previously to the patent, in the puddling furnace, for months together. As to mine rubbish, he says, we varied the proportions, and we found, in experience, that the use of it was best without reference to the preparations and restrictions pointed out in the specification, and when omitted, the result was best of all. It is true, he afterwards states, that this omission took place when he was absent from home, and that, on his return, he ordered the mine rubbish to be restored; and in this respect, and going to this single point, there appears to be an inconsistency. But still, as the case stands on his single evidence, if, in substance and result, it proves a mode of working essentially different from the specification, the foundation of the plaintiff's case is altogether gone. And the rule is, in this respect, strict, as stated by

tity. It is not always true that one machine, for instance, is not an infringement upon another, because it is better than the other; for it may contain the whole substance of that other machine, and something in addition which makes it better; or the patent may have been taken for an entire machine, substantially new in its structure, and the machine complained of may contain some substantial operating part of the machine patented, and so infringe. But where the patent is for some one operating part of a machine, designed to effect a particular end, and the machine complained of effects that end materially better, by the use of means which are in point of fact different, then the two modes of operation are not the same under the patent law. In other words, when the means employed are, in point of fact, not the same, or a known mechanical equivalent, and the ques-

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Mr. Justice Buller, in the case of *Turner* v. *Winter*, (Webs. Pat. Cas. 77.) In that case, the learned judge expressed himself in these words: 'Whenever the patentee brings an action on his patent, if the novelty or effect of the invention be disputed, he must show in what his invention consists, and that he procured the effect proposed, in the manner specified (Webs. Pat. Cas. 81);' and in another part of the same case, he adds: 'Slight defects in the specification will be sufficient to vacate the patent (Webs. Pat. Cas. 82);' and speaking of degree and proportion, he says: 'The specification should have shown by what degree of heat the effect was to be produced.' In that case, as in a great variety of others, instances may be found to show the strictness of the law, as bearing upon this point, either in regard of omission, or of superfluous addition, or of uncertainty or insufficiency in quantities proposed. But, further, the evidence so applied does not confine itself to this point only; for it disproves also utility, as far as it depends on combination and proportion, leading and conducing to a specific result. Neither can it be justly said, that the use of the separate ingredients, or some of them partially combined, is a use made of the invention in part, so as to support the counts adapted to such partial use; because, as it has been already observed, and will more particularly be adverted to hereafter, each of the ingredients had before been separately used, and had been used, more or less, in partial combination.

"On the whole, our opinion is, as to this part of the case, that, considering the evidence of Forman, in its substance and result, and with reference to the peculiar nature of the patent, an infringement of the patent is not thereby proved." Hill *v.* Thompson, Webs. Pat. Cas. 244, 245, 246.

tion to be determined is, whether they are, under the patent law, the same in substance, or, as it is usually called, the same in principle, superior utility settles that question. Two things are not the same under the patent law, when one is practically, substantially better than the other, and this improvement is not gained by the use of known mechanical equivalents.

§ 244. This view of the patent law relieves it in a great degree from the uncertainties which have arisen from the loose and indeterminate sense, in which the word "principle" has been employed; and, at the same time, it is in exact accordance with the great purposes, as well as with the particular provisions of that system of law. Its leading purpose was to encourage *useful* inventions. Practical utility was its object; and it would be strange, if, with such object in view, it should consider two things as substantially the same, which, practically and in reference to their respective utility, are substantially different. And although this test has not seldom been lost sight of, in the trial of patent causes, yet there is nowhere any authority opposed to it, and there is certainly much in its favor.[1]

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[1] Thus, in Davis *v.* Palmer, 2 Brock. 310; Mr. Chief Justice Marshall states the principle clearly. He was commenting on the clause in the old patent law, that "simply changing the form or the proportion of any machine, shall not be deemed a discovery;" and he says, "in construing this provision, the word 'simply' has, we think, great influence; it is not every change of form and proportion, which is declared to be no discovery, but that which is simply a change of form and proportion, and nothing more. If by changing the form and proportion a *new effect* is produced, there is not simply a change of form and proportion, but *a change of principle also.*" To the same effect are the following cases: Earle *v.* Sawyer, 4 Mas. 1, where the substitution of a circular saw, in place of a reciprocating saw, in a shingle machine, was held to be a patentable improvement. — Davol *v.* Brown, 1 Woodb. & M. 53, where the arrangement of bowed flyers, in a fly-frame, in two rows, was held to be patentable, although open-bottomed flyers had previously been arranged in two rows, and geered in the same way, and bowed-flyers had been arranged in the one row with like geering. — Russell *v.* Cowley, Webs. Pat. Cas. 464, where it was held, that tubes having been welded by grooved rollers on a maundrill, it was a patentable improvement to weld them by grooved rollers without a maundrill; and Lord Lyndhurst

§ 245. Every patent stands upon its subject-matter, and accordingly the question of infringement depends upon the use of that which is covered by the patent. A patent may be for a new combination, whether the particular parts or things constituting that combination be new or old. But where the patent is for a combination, and not for several and distinct improvements, it is no infringement to use any of the parts or things which go to make up the combination, if the combination itself be not used.[1]

§ 246. But on the other hand, where the patent is for several distinct improvements or things, and does not stand upon the combination of such things, then the use of any one of them will be an infringement.[2] But in order to succeed in an action for the infringement of any one of such improvements, it was formerly necessary with us, as in England, that the whole of the improvements claimed as such should be new; and if the novelty of any one of them failed, though it might not be the one used by the defendant, the action could not be sustained.

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puts the case of welding them by *fixed dies* instead of *rollers*. See also Kneass *v.* Schuylkill Bank, 4 Wash. 9; Crane *v.* Price, Webs. Pat. Cas. 409; Webster on the Subject-matter, &c. 26, n. t. 30; 1 Webs. Pat. Cas. 95.

In these cases the principle is necessarily involved, and in some of them distinctly announced, that any change in the instruments employed, by which a new result is produced, or an old result produced in a more economical and beneficial manner, is the subject of a patent. It is an invention of a *new* thing, under the patent law. The same test is proposed by Mr. Webster, in his very able dissertation on the Subject-matter of Patents, page 27. He says, in substance, that the question is, whether the change be colorable and formal, or substantial and essential; that is, whether it be such as would of itself support a patent. The jury must find whether what is new is essential, or useless, and a colorable evasion; whether, by reason of the change, the thing has acquired a new and distinct character.

[1] Barrett *v.* Hall, 1 Mas. 447. See the observations of Mr. Justice Story, cited from this case, *ante*, p. 82; Evans *v.* Eaton, 1 Peters, C. C. R. 343.

[2] Moody *v.* Fisk, 2 Mas. 115.

The reason for this was, not that the right of the patentee would not have been infringed, if he had had a valid patent, but that his patent was void, on account of a partial failure of the whole consideration on which it was granted; the consideration on which a patent was granted being the novelty of all the things represented to be new, regarded as an entirety; and the consideration being entire, if it failed in part, it failed as to the whole. The government was, in such a case, deceived in its grant; the whole patent was therefore inoperative, and no action could be maintained upon it.[1]

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[1] In Moody *v.* Fisk, 2 Mas. 112, 115, Mr. Justice Story hinted at this doctrine, when he said that, "In such a case, the patent goes for the whole of the improvements, *and if each be new and be claimed distinctly in the patent*, there does not seem to be any good reason why the party who pirates any part of the invention should not be liable in damages." The subsequent cases in England, of Hill *v.* Thompson, 8 Taunt. 382; 2 B. Moore, 433; Webs. Pat. Cas. 239; Brunton *v.* Hawkes, 4 B. & Ald. 541; and Morgan *v.* Seaward, 2 M. & W. 544; Wobs. 187; have fully established this doctrine. In the last of these cases, Mr. Baron Parke, delivering the judgment of the court, said, "This brings me to the question whether this patent, which suggests that certain inventions are improvements, is avoided if there be one which is not so; and upon the authorities we feel obliged to hold that the patent is void, upon the ground of fraud on the crown, without entering into the question whether the utility of each and every part of the invention is essential to a patent, where such utility is not suggested in the patent itself as the ground of the grant. That a false suggestion of the grantee avoids an ordinary grant of lands and tenements from the crown, is a maxim of the common law, and such a grant is void, not against the crown merely, but in a suit against a third person. It is on the same principle that a patent for two or more inventions, when one is not new, is void altogether, as was held in Hill *v.* Thompson, 2 Moore, 424, 8 Taunt. 375, and Brunton *v.* Hawkes, 4 B. & Ald. 542; for, although the statute invalidates a patent for want of novelty, and consequently, by force of the statute the patent would be void so far as related to that which was old, yet the principle on which the patent has been held to be void altogether is, that the consideration for the grant is the novelty of all, and the consideration failing, or, in other words, the crown being deceived in its grant, the patent is void, and no action maintainable upon it. We cannot help seeing, on the face of this patent, as set out in the record, that an improvement in steam engines

§ 247. The statute of July 4, 1836, § 15, recognizes this doctrine, by establishing as a defence that the patentee was not the first inventor of the thing patented, "or of a substantial and material part thereof claimed as new." But a more recent statute has provided that the patent shall be deemed good and valid for so much of the invention or discovery as shall be truly and *bonâ fide* the invention or discovery of the patentee, if it is a material and substantial part of the thing patented, and is definitely distinguishable from the other parts which the patentee had no right to claim, notwithstanding the specification may be too broad, if it was so made by mistake, accident or inadvertence, and without any wilful default or intent to defraud or mislead the public."[1] This leaves the former doctrine, by which a failure of novelty in any part vitiated the whole patent, still applicable to cases where the claim was made too broad, wilfully and knowingly, or with intent to defraud or deceive the public.

§ 248. The effect of a failure, in point of utility of one or more of several parts or things claimed as distinct inventions, is held in England to be the same as a failure in point of novelty. If any thing claimed as essential turn out to be useless, the patent is voidable, provided it was known to the patentee, at the time of enrolling his specification, to be useless, because he misleads the public by representing it to be useful;

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is suggested by the patentee, and is part of the consideration for the grant; and we must reluctantly hold that the patent is void, for the falsity of that suggestion. In the case of Lewis *v.* Marling, (10 B. & C. 22; 5 M. & Ry. 66,) this view of the case, that the patent was void for a false suggestion, does not appear by the report to have been pressed on the attention of the court, or been considered by it. The decision went upon the ground that the brush was not an essential part of the machine, and that want of utility did not vitiate the patent; and, besides, the improvement by the introduction of the brush is not recited in the patent itself as one of the subjects of it, which may make a difference. We are, therefore, of opinion, that the defendants are entitled to our judgment on the third issue." See, also, the elaborate judgments in Brunton *v.* Hawkes.

[1] Act of 1837, § 9.

but if it was subsequently discovered not to be useful, material, or necessary, it forms no ground of objection to the patent.[1] A patent for an entire machine or other subject which is, taken altogether, useful, though a part or parts may be useless, will be valid, provided there is no false suggestion.[2] So, too, a finding of the jury, that the invention is useful on the whole, but fails or is not useful in some cases, is not a ground of nonsuit.[3]

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[1] Lewis *v.* Marling, 10 B. & C. 22; 4 Car. & P. 57; Webs. Pat. Cas. 493.

[2] Morgan *v.* Seaward, Webs. Pat. Cas. 197.

[3] Haworth *v.* Hardcastle, Webs. Pat. Cas. 480, 483. In this case, Sir N. C. Tindal, C. J. said, "The motion for entering a nonsuit was grounded on two points; first, that the jury had, by their special finding, negatived the usefulness of the invention to the full extent of what the patent and specification had held out to the public; secondly, that the patentee had claimed in his specification the invention of the rails or staves over which the cloths were hung, or, at all events, the placing them in a tier at the upper part of the drying room. As to the finding of the jury, it was in these words: "The jury find the invention is new and useful upon the whole; and that the specification is sufficient for a mechanic, properly instructed, to make a machine, and that there has been an infringement of the patent; but they also find that the machine is not useful in some cases for taking off goods. The specification must be admitted, as it appears to us, to describe the invention to be adapted to perform the operation of removing the calicoes and other cloths from off the rails or staves after they have been sufficiently dried. But we think we are not warranted in drawing so strict a conclusion from this finding of the jury as to hold that they have intended to negative, or that they have thereby negatived, that the machine was useful in the generality of the cases which occur for that purpose. After stating that the machine was useful on the whole, the expression that 'in some cases it is not useful to take up the cloths,' appears to us to lead rather to the inference that in the generality of cases it is found useful. And if the jury think it useful in the general, because some cases occur in which it does not answer, we think it would be much too strong a conclusion to hold the patent void. How many cases occur, what proportion they bear to those in which the machine is useful, whether the instances in which it is found not to answer are to be referred to the species of cloth hung out, to the mode of dressing the cloths, to the thickness of them, or to any other cause distinct and different from the defective structure or want of power in the machine, this finding of the jury gives us no information whatever. Upon such a finding, therefore, in a case where the jury have given their general verdict for the

But these cases are entirely distinguished from those where the purpose wholly fails, and the invention described does not accomplish the effect that is claimed for it. On a patent of this description, of course no action whatever can be maintained.[1]

§ 249. The principles of our law would apparently lead to the same conclusions upon this subject; for although it is not material, whether the subject-matter of a patent is more or less useful, it must possess some utility; and if the subject-matter consists of several things, all included in one patent, but claimed as the distinct inventions of the patentee, a failure of any one of them, in point of utility, must vitiate the patent, if it was represented to be useful, when it was known not to be so, for the same reasons which are applicable in England. Our statute, moreover, has expressly provided, as one of the defences to an action on a patent, "that it contains more than is necessary to produce the described effect," when such addition "shall fully appear to have been made for the purpose of deceiving the public;" that is to say, when it appears that the patentee was aware that he was introducing something not useful, material, or necessary, at the time of preparing his specification.[2]

§ 250. The rule of damages for the infringement of a patent is

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plaintiff, we think that we should act with great hazard and precipitation, if we were to hold that the plaintiff ought to be nonsuited upon the ground that his machine was altogether useless for one of the purposes described in his specification."

[1] Manton *v.* Parker, Dav. Pat. Cas. 327. This was a patent for "a hammer on an improved construction, for the locks of all kinds of fowling-pieces and small arms;" and a material part of the invention consisted in a *means of letting out the air from the barrel and causing a communication* between the powder in the pan and in the barrel, without, at the same time, letting out the powder. The witnesses for the defendant having proved that the powder passed through the same hole as the air, the plaintiff was nonsuited.

[2] Act of July 4, 1836, § 15.

provided by statute in the following terms: "that, whenever in any action for damages for using or selling the thing whereof the exclusive right is secured by any patent heretofore granted, or which shall hereafter be granted, a verdict shall be rendered for the plaintiff in such action, it shall be in the power of the court to render judgment for any sum above the amount found by such verdict as the actual damages sustained by the plaintiff, not exceeding three times the amount thereof, according to the circumstances of the case."[1] By the terms "actual damages, sustained by the plaintiff," are meant such damages as he can actually prove, and has in fact sustained, as contra-distinguished from mere imaginary or vindictive damages, which are sometimes given in personal torts.[2] These damages will be trebled by the court, according to the statute.[3]

§ 251. In estimating the "actual damage," the rule is, in cases of infringement by an actual use of the plaintiff's invention — as by making and using a patented machine — to give the value of such use during the time of the illegal user, that is to say, the amount of profits actually received by the defendant.[4] To this, it seems there should also be added all the losses to which the plaintiff has been subjected by the piracy.[5]

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[1] Act of July 4, 1836, § 14.

[2] Whittemore *v.* Cutter, 1 Gallis. 429. It seems, however, that if the defendant is sued a second time for an infringement, exemplary damages may be given. Alden *v.* Dewey, 1 Story's R. 336, 339.

[3] Lowell *v.* Lewis, 1 Mas. 184, 185; Gray *v.* James, Peters's C. C. R. 394.

[4] Lowell *v.* Lewis, 1 Mas. 184, 185; Whittemore *v.* Cutter, 1 Gallis. 429.

[5] In Earle *v.* Sawyer, 4 Mas. 1, 12, Mr. Justice Story said: "But I wish to say a few words in relation to the point of law, which the objection suggests, and which is founded upon the decision of this court, in the case of *Whittemore* v. *Cutter*, (1 Gallis. R. 479.) To that decision, as founded in just principle, I still adhere, although, I confess, with subdued confidence, since, I have reason to believe, that it has not met the entire concurrence of other and abler judicial minds. It has been maintained, by some learned

§ 252. But where merely the making of a patented machine

persons, that the price of the invented machine is a proper measure of damages, in cases where there has been a piracy by making and using the machine, because, in such cases, the verdict for the plaintiff entitles the defendant to use the machine subsequently, and, in short, transfers the right to him in the fullest manner, and, in the same way, that a recovery in trover or trespass, for a machine, by operation of law, transfers the right to such machine to the trespasser, for he has paid for it. If I thought such was the legal operation of a verdict for the plaintiff, in an action for making and using a machine, no objection could very forcibly occur to my mind against the rule. But my difficulty lies here. The patent act gives to the inventor the exclusive right of making and using his invention during the period of fourteen years. But this construction of the law enables any person to acquire that right, by a forced sale, against the patentee, and compels him to sell, as to persons or places, when it may interfere essentially with his permanent interest, and involve him in the breach of prior contracts. Thus, the right would not remain exclusive; but the very attempt to enforce it would involve the patentee in the necessity of parting with it. The rule itself, too, has no merit from its universality of application. How could it apply, when the patentee had never sold the right to any one? How, when the value of the right depended upon the circumstance of the right being confined to a few persons? Where would be the justice of its application, if the invention were of enormous value and profit, if confined to one or two persons, and of very small value if used by the public at large, for the result of the principle would be, that all the public might purchase and use it by a forced judicial sale. On the other hand, cases may occur, where the wrong done to the patentee may very far exceed the price, which he would be willing to take for a limited use by a limited number of persons. These, among others, are difficulties which press on my mind against the adoption of the rule; and where the declaration goes for a user during a limited period, and afterwards the party sues for a user during another and subsequent period. I am unable to perceive, how a verdict and judgment in the former case is a legal bar to a recovery in the second action. The piracy is not the same, nor is the gravamen the same. If, indeed, the plaintiff, at the trial, consents that the defendant shall have the full benefit of the machine forever, upon the ground of receiving the full price in damages, and the defendant is content with this arrangement, there may be no solid objection to it in such a case. But I do not yet perceive how the court can force the defendant to purchase, any more than the plaintiff to sell, the patent right, for the whole period it has to run. The defendant may be an innocent violator of the plaintiff's right; or he may have ceased to use, or to have employment for such a machine. There are other objections alluded to in the case in 1 Gallis. R. 434.

is proved, as no actual damages have been sustained, nominal damages only should be given.[1]

§ 253. Where patented articles (cast-iron water wheels) were manufactured by the defendants on an order given by a third person, and the order was partially executed before the defendants had notice of the patent, and two wheels only were cast

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Struck with similar difficulties, in establishing any general rule to govern cases upon patents, some learned judges have refused to lay down any particular rule of damages, and have left the jury at large to estimate the actual damages, according to the circumstances of each particular case. I rather incline to believe this to be the true course. There is a great difference betwẽen laying down a special and limited rule, as a true measure of damages, and leaving the subject entirely open, upon the proofs in the cause, for the consideration of the jury. The price of the machine, the nature, actual state and extent of the use of the plaintiff's invention, and the particular losses, to which he may have been subjected by the piracy, are all proper ingredients to be weighed by the jury in estimating the damages, *valere quantum valcant.*"

See also the observations of Lord Justice Clerk Hope, in the Househill Company *v.* Neilson, cited Webs. Pat. Cas. 697, *note*. In Pierson *v.* The Eagle Screw Company, 3 Story's R. 410, Mr. Justice Story again said: "But, upon the question of damages, I would, upon this occasion, state, (what I have often ruled before,) that if the plaintiff has established the validity of his patent, and that the defendants have violated it, he is entitled to such reasonable damages as shall vindicate his right, and reimburse him for all such expenditures as have been necessarily incurred by him beyond what the taxable costs will repay, in order to establish that right. It might otherwise happen, that he would go out of court with a verdict in his favor, and yet have received no compensation for the loss and wrong sustained by him. Indeed, he might be ruined by a succession of suits, in each of which he might, notwithstanding, be the successful party, so far as the verdict and judgment should go. My understanding of the law is, that the jury are at liberty, in the exercise of a sound discretion, if they see fit, (I do not say that they are positively and absolutely bound under all circumstances) to give the plaintiff such damages, not in their nature vindictive, as shall compensate the plaintiff fully for all his actual losses and injuries occasioned by the violation of the patent by the defendants."

[1] Whittemore *v.* Cutter, *ut supra.*

after notice, it was held that nominal damages only were proper.[1]

§ 254. It was formerly doubted, whether the jury were at liberty to allow, as part of the actual damage, the counsel fees and expenses of witnesses beyond the taxable costs, incurred by the plaintiff in vindicating his right. But it is now the established rule and practice to allow them.[2]

§ 255. As to the time of the acts complained of as amounting to an infringement, it is obvious that the patent cannot be infringed by any thing done when the patent did not exist; and therefore it is no infringement to make or use a machine subsequently patented, or otherwise to practise the invention which is afterwards made the subject of a patent, before the patent is obtained. But when a patent is granted, the right in the subject-matter relates back to the time of the invention, so that the party who has practised the invention between the time of the discovery and the issuing of the patent, must cease to do so. Any acts of infringement done after the issuing of the patent will be ground for the recovery of damages, although the previous acts were done at a time when it was uncertain whether there would be any patent issued.[3] The same is true of acts done in violation of a patent which is surrendered and renewed on account of defects in the specification. If a party erect and put in use a patented machine during the existence of a defec-

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[1] Bryce *v.* Dorr, 3 McLean, 582.

[2] Boston Manuf. Co. *v.* Fiske, 2 Mason, 119, 120. In England, damages at law are generally only nominal. Lewis *v.* Marling, Webs. Pat. Cas. 493, n. The plaintiff is not entitled to damages in a second action as of right. Minter *v.* Mower, Ibid. 138. Damages should consist of profits and compensation for the infraction of the right. The Houschill Company *v.* Neilson, *Ibid.* 697. *Semble*, that acts done in reliance on a former verdict against a patent are evidence in reduction of damages. Arkwright *v.* Nightingale, Ibid. 61.

[3] Evans *v.* Weiss, 2 Wash. 342; Dixon *v.* Moyer, 4 Wash. 68.

tive patent which is afterwards surrendered, it will be an infringement of the new and renewed patent, if he continues the use of such machine after the renewal; and it seems that no notice of the renewal is necessary; and if it is, that knowledge of the original patent will be notice of the renewed patent granted in continuation of it, according to the provisions and principles of law.[1]

§ 256. A patentee may recover damages for an infringement during the time which intervened between the destruction of the patent office by fire, in 1836, and the restoration of the records under the act of March 3, 1837.[2]

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[1] Ames *v.* Howard, 1 Sumner, 482, 488. In this case Mr. Justice Story said, "The next objection is, that in point of law the plaintiff is not entitled, without some previous notice or claim, to maintain this action under his patent against the defendants, for continuing the use of the machines erected and put in use by them before the patent issued. This objection cannot prevail. I am by no means prepared to say, that any notice is, in cases of this sort, ever necessary to any party, who is actually using a machine in violation of the patent right. But it is very clear, that in this case enough was established in evidence to show, that the defendants had the most ample knowledge of the original patent taken out by the plaintiff in 1822, and of which the present is only a continuation, being grounded upon a surrender of the first for mere defects in the original specification. Whoever erects or uses a patented machine, does it at his peril. He takes upon himself all the chances of its being originally valid; or of its being afterwards made so by a surrender of it, and the grant of a new patent, which may cure any defects, and is grantable according to the principles of law. That this new patent was so grantable is clear, as well from the decision of the supreme court in Grant *v.* Raymond, (6 Peters R. 218,) as from the Act of Congress of the 3d of July, 1833, ch. 162. There is no pretence to say, that the defendants were *bonâ fide* purchasers without any knowledge or notice of any adverse claim of the plaintiff under this original patent; and the damages were by the court expressly limited to damages which accrued to the plaintiff by the use of the machine after the new patent was granted to the plaintiff."

[2] Hogg *v.* Emerson, 6 How. 437.

NOTE. The following discussion is extracted from Mr. Webster's short Treatise on the Subject-Matter of Patents.

The Principle of an Invention.

The use of the term "principle," in reference to the subject-matter of letters patent, has given rise to so much discussion, that some remarks upon it may not form an improper conclusion to this part of the subject. It is said, most truly, that there cannot be a patent for a principle; that a principle must be embodied and applied so as to afford some result of practical utility in the arts and manufactures of the country, and that under such circumstances a principle may be the subject of a patent.[1] In a certain sense, indeed, a principle so embodied and applied may be considered as the subject of a patent, but it is that embodiment and application which is in reality the subject-matter of the patent. The principle so embodied and applied, and the principle of such embodiment and application, that is to say, the principle of the invention, are essentially distinct; the former being a truth of exact science, or a law of natural science, or a rule of practice; the latter, the practice founded upon such truth, law, or rule. The want of a due appreciation of this distinction was the foundation of much of the discussion which occurred in the proceedings on Watt's patent, but the distinction was fully recognised and adopted by Mr. Justice Buller, in the following passage:[2]

"There is one short observation arising on this part of the case, which seems to me to be unanswerable, and that is, that if the principle alone be the foundation of the patent, it cannot possibly stand, with that knowledge and discovery which the world were in possession of before. The effect, the power, and the operation of steam were known long before the date of

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[1] The fair mode of looking at a patent and the specification is to inquire what is the spirit of the invention, or the principle, and this must be embodied in some mode or method, because it is admitted on all hands you cannot take out a patent for a principle. But although the law says undoubtedly, and correctly enough, that you cannot take out a patent for a principle, that is, for a barren principle, when you have clothed it with a form, and given it body and substance, in which the principle may live and produce the benefit which you claim to result from it, why, then, in many cases, (and it is a consolation to every just and honest feeling one has on the subject of invention,) although you cannot have a patent for a principle in substance, you can have a patent for the spirit of your invention, for if any other person comes and clothes the spirit of your invention with a different body, and puts that principle in use in any other shape or fashion, it is always a question for a jury, whether, however different in appearance, in shape, in form, in method — whether the article or the practice, if it be matter connected with the arts and manufactures, be or be not substantially an adaptation of the principle, applied with the same view to answer the same end, and merely imitated in substance whatever difference there may be in point of form. See *per* Sir F. *Pollock*, Pat. Rep. 145. See also in proceedings on Neilson's patent, Ibid. 342.

[2] 2 H. Bl. 485, 486. See also Webs. on Pat. 2 n. d.

this patent ; all machines which are worked by steam are worked by the same principle. The principle was known before, and therefore, if the principle alone be the foundation of the patent, though the addition may be a great improvement, (as it certainly is,) yet the patent must be void *ab initio*. But then it was said, that though an idea or principle alone would not support the patent, yet that an idea reduced into practice, or a practical application of a principle, was a good foundation for a principle, was a good foundation of a patent, and was the present case. The mere application or mode of using a thing was admitted in the reply not to be a sufficient ground ; for on the court putting the question, whether, if a man, by science, were to devise the means of making a double use of a thing known before, he could have a patent for that, it was rightly and candidly admitted that he could not.[1] The method and the mode of doing a thing are the same, and I think it impossible to support a patent for a method only, without having carried it into effect, and produced some new substance."

"But here it is necessary to inquire, what is meant by a principle reduced into practice. It can only mean a practice founded on principle, and that practice is the thing done or made, or in other words, the manufacture which is invented." The assertion, then, that there cannot be a patent for a principle, amounts, in effect, to nothing more than an assertion that a truth of exact, or a law of natural science, or a rule of practice, is not any manner of manufacture; the discovery and enunciation of such truth, law, or rule, may be a valuable addition to our knowledge, but it cannot be described as the working or making of some manner of new manufacture, which working or making is the only discovery and invention which by law can be the subject-matter of letters-patent.

The term "principle" admitting of the above-mentioned varieties of construction and interpretation, according to the circumstances under which it is used, it becomes important to advert to certain other distinctions existing in the nature of the principles which are to be embodied and applied, so as to constitute invention, which may be the subject of letters patent. Those principles which may be defined and classified as truths of exact science, or laws of natural science, are in their nature essentially distinct from those which may be defined as rules of practice ; the former having, so to speak, an independent and original existence,[2] the latter being derived and originating altogether with man, and as such of necessity partaking in some degree of the character of invention. Further, the truths of exact or mathematical science differ from the laws of natural science in this: that the former are founded on definition, the latter on observation and experiment ; and both

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[1] As to the cases of new application, which may be properly described as a double use, and which cannot be the subject-matter of letters patent, see Pat. Rep. 208, n. f.

[2] See the observations of Mr. Baron Alderson on the subject, Pat. Rep. 342, and *post*.

differ from the class of principles which have been described as rules of practice.

The instrument known by the name of Hadley's quadrant or sextant, furnishes a good illustration of the embodying and application of a truth of exact science, and of a law of natural science, namely, of certain propositions of geometry for the measurement of angles, and of the laws of light when incident on, and reflected by, plane surfaces inclined to each other. The principle of this invention was the arranging and combining inclined reflecting surfaces, and certain radii and arcs of a circle, so as to give effect to such truths and laws for the measurement of the angular distance of objects; the principle then of this invention is a rule whereby those truths of exact science and laws of natural science become embodied.[1] In the same manner, Dollond's invention[2] of the achromatic object-glass, was founded on certain truths of exact science, respecting curved surfaces and the laws of light, when refracted by those surfaces; the combining of a convex lens of crown glass, and a concave lens of flint glass, of proper curvatures, was the rule of practice by which these object-glasses were made.

The principle of Clegg's invention of a gas-meter partakes, to a certain extent, both of a law of natural science and of a rule of practice. The laws of natural science, respecting the motion of a solid immersed in a fluid, are applied in conjunction with certain rules of practice for the admission and emission of gas, and the opening and closing of certain orifices for that purpose, and the result was an apparatus for measuring the quantity of gas supplied.[3]

The oscillation of the pendulum takes place according to the laws of falling bodies, and the vibration of the balance, according to the laws of elasticity of bodies; these principles are embodied in our ordinary clocks and watches. The laws of latent heat, of the rapid evaporation of liquids in vacuo, of the union of certain substances, chemically, in definite proportions, and of electricity, have given rise to a great variety of useful inventions, in which these laws respectively are embodied. Such truths, laws, or principles, having an existence anterior to, and independent of, the operations of man, cannot of themselves be the subject of letters-patent; but when they have been embodied or applied in practice to a particular purpose, then the invention to which they give rise is properly described, as founded on those laws, and the principle of the invention is the practice whereby those laws are enabled to produce useful effects. Thus, the inventions of Watt were

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[1] The beautiful toy, called the Kaleidoscope, depends, in like manner, on the laws of the reflection of light, incident on, and reflected by two planed mirrors, inclined at a small angle to each other; the objects and the eye being situated between the mirrors, in such a position that each object gave a number of images on the circumference of a circle.

[2] See specification of this invention, Pat. Rep. 43.

[3] See specification and description of the invention, Pat. Rep. 103, and *post*.

applications of the laws of the elasticity and of the latent heat of steam; and a great variety of other instances might be adduced in which well-known principles[1] are, so to speak, embodied and clothed, or connected with a material form, for some particular and specified purpose, in the arts and manufactures, and so as to be in a condition to act and to produce effects.

Such being the import of the term principle, as applied to inventions founded on the truths of exact science, and laws of natural science, it remains to consider the use of that term, with reference to those cases where no truth of exact science, or law of natural science is embodied, but where the arrangements and rules of practice are not referable immediately, if at at all, to such truths or laws, but to certain rules of practice. The cases placed in the first and third classes, will illustrate inventions founded simply on a rule of practice, in contradistinction to inventions founded on a truth of exact, or a law of natural science. Thus the principle of Arkwright's invention was the use and arrangement of certain known things, in a particular manner, for spinning cotton.[2] The principle of Huddart's invention, was the compressing the yarns, and drawing them through a tube.[3] The principle of Jupe's[4] for an expanding table, was the cutting the table across, and making the parts to diverge from the centre, and withdrawing the sections, and filling up the openings, by leaves or suitable pieces. The principle of Galloway's improvements in machinery, for propelling vessels,[5] was the arrangements of parts, for giving different positions to the float-boards, during the revolution of the paddle-wheel; and the principle of the invention under his second patent,[6] was the arrangement of float-boards, in a fixed

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[1] It is of considerable importance, that the meaning of the term principle, when applied in the strictest sense, should be distinctly understood. For this purpose, it may be well to add a few illustrations of the truths of exact science, and of the laws of physical or natural science. All propositions founded on definitions, and to which, by reason of their being so founded, the term "demonstration" is applicable, are truths of exact science; as the well-known propositions of geometry, that in a right-angled triangle, the square of the hypothenuse is equal to the sum of the squares of the opposite sides; that the angle of the centre of a circle, is double the angle at the circumference; or that similar triangles are to each other in the duplicate ratio of their homologous sides. The truths or laws of natural science differ from the preceding in this, that they are not founded on definition, or capable of demonstration in the strict sense of the term — they are rules derived from observation, and describing what will take place under particular circumstances. Thus we speak of the laws of falling bodies, that is, the rules respecting their motions; of the laws of the atmosphere, of light, of electricity, all which are merely rules derived from observation; we learn by experience that such phenomena, under certain circumstances, will present themselves, and one state of things being supposed, we are able to anticipate and predict the following.

[2] See Pat. Rep. 56.

[3] Ibid. 85.

[4] Ibid. 143.

[5] See in Morgan *v.* Seaward, Pat. Rep.

[6] See in Galloway *v.* Bleaden, 15 Rep. Arts, N. S. and Pat. Rep.

position, according to an assigned law or rule. In all such cases, the principle of the invention is the particular arrangement, combination, composition, or application, according to the rule of operation and construction, by which the working or making of the manufacture, the subject of the letters-patent, is to be carried out in practice. The cases placed under the third class serve to illustrate those inventions, the principle of which may be said to be founded simply on a rule of practice, and not on any truth of exact, or law of natural science. In many of the cases under the third class, the principle of the invention is the application or adaptation of some known property or quality of a substance; as in Forsyth's patent,[1] where the principle of the invention was the application of detonating powder in discharging artillery; and in Hall's, the application of the flame of gas to singing lace.[2] Thus, in every class of cases, the dictum of *Buller*, J.,[3] that a principle reduced to practice, and a practice founded on principle, are really the same thing, is fully supported.[4]

An important practical question arises, with reference to many of the cases which have been placed under the second and third class,[5] as to the extent to which the inventor can appropriate to himself the application of the truth of exact science, or the law of natural science, or the rule of practice constituting the peculiar feature of his invention. In respect of the truths of exact science, or laws of natural science, independent of their application, no invention which is the subject of letters-patent, or special property, so to speak, can exist. The question then arises, to what extent may such truth or law, by reason of its application, be appropriated, and the answer is, to the extent of all other applications which a jury shall consider as a piracy of the former. It is impossible to lay down any general rules on this point; the subject does not admit of being so dealt with, and it should always be borne in mind, with reference to the law of patents, that each case must be judged of by its peculiar circumstances. The following observations by Mr. Baron Alderson, in the recent proceedings in Neilson's patent,[6] are deserving of peculiar attention, and exhibit in a clear manner the difficulties of the case: — "I take the distinction between a patent for a principle, and a patent which can be supported, is, that you must have an embodiment of the prin-

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[1] Pat. Rep. 97.

[2] Ibid.

[3] Ante.

[4] If any further observations were necessary in support of the preceding, it might be remarked that the phrases "the principle of my invention consists in," or "my invention consists in," naturally suggest themselves in many cases indifferently, as synonymous expressions, in describing an invention, thus showing that, substantially and practically, there is no difference in these phrases.

[5] Webs on Pat. 11, 18.

[6] See report of this case, Pat. Rep. 342.

ciple, in some practical mode, described in the specification, of carrying the principle into actual effect, and then you take out your patent, not for the principle, but for the mode of carrying the principle into effect. In Watt's patent, which comes the nearest to the present of any you can suggest, the real invention of Watt was, that he discovered that, by condensing steam in a separate vessel, a great saving of fuel would be effected, by keeping the steam cylinder as hot as possible, and applying the cooling process to the separate vessel, and keeping it as cool as possible, whereas before, the steam was condensed in the same vessel; but then Mr. Watt carried that practically into effect, by describing a mode which would effect the object. The difficulty which presses on my mind here, is, that this party has taken out a patent, in substance like Watt's, for a principle — that is, the application of hot air to furnaces — but he has not practically described any mode of carrying it into effect. If he had, perhaps he might have covered all other modes as being a variation. It is very difficult to see what is a patent for a principle, and for a principle embodied in a machine, because a patent can only be for a principle embodied in a machine. You cannot take out a patent for a principle. I have always thought that the real test was this: that, in order to discover whether it is a good or a bad patent, you should consider that what you cannot take out a patent for, must be considered to have been invented *pro bono publico*, that is to say, the principle must be considered as having had an anterior existence before the patent.[1] Now supposing, in Watt's case, it had been known that, to condense in a separate vessel, was a mode of saving fuel, then Watt certainly would have taken out a patent for carrying into effect that principle by a particular machine; but then his patent would have been for a machine; and if I invented a better machine for carrying out the principle, I do not infringe his patent, unless my machine is a colorable imitation. But you must embody the principle in the machine, and you stop all possible improvements, because you infringe the principle, which you have no right to do; it is the principle of the machine. It is very difficult for a jury to distinguish that, but it is the most essential thing possible. Now here, supposing it had been known that hot air applied to a furnace was a great improvement on cold air, and that this person had taken out his patent, and this patent was a patent for the application of a well-known thing — the hot air to furnaces — then he takes out a patent for applying it, by means of an intermediate reservoir between the blast-furnace and the bellows; then surely anybody else may apply the same principle, provided he does not do it by a reservoir intermediately between the blast-

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[1] The following observation of the same learned judge is important, with reference to this question: — "You see you do not interfere with any benefit which the inventor has, if he knows of no particular mode of carrying his principle into effect. You do not interfere with any benefit which he ever had, if he never had a practical mode of carrying it into effect." Printed Case, 4to. p. 198.

furnace and the bellows — and the question for a jury is, whether or not a long spiral pipe is a reservoir — if it be not a reservoir, or a colorable imitation of a reservoir, it is no infringement."

The same learned judge, in another case, the proceedings on Jupe's patent,[1] remarked, with reference to Clegg's gas meter,[2] as follows: "There never was a more instructive case than that. I remember very well the argument put by the lord chief baron, who led that case for the plaintiff, and succeeded. There never were two things to the eye more different than the plaintiff's invention, and what the defendant had done in contravention of his patent right. The plaintiff's invention was different in form — different in construction; it agreed with it only in one thing — and that was by moving in the water a certain point was made to open, either before or after, so as to shut up another, and the gas was made to pass through this opening — passing through it, it was made to revolve it. The scientific men, all of them, said, the moment a practical scientific man has got that principle in his head, he can multiply without end the forms in which that principle can be made to operate. The difficulty which will press on you, and to which your attention will be called in the present case, is this; you cannot take out a patent for a principle — you may take out a patent for a principle, coupled with the mode of carrying the principle into effect, provided you have not only discovered the principle, but invented some mode of carrying it into effect. But then you must start with having invented some mode of carrying the principle into effect; if you have done that, then you are entitled to protect yourself from all other modes of carrying the same principle into effect, that being treated by the jury as piracy of your original invention. But then the difficulty which will press on you here is, that on the evidence there does not appear to have been any mode of carrying the principle into effect at all invented by you."

The attention of this learned judge having been called, in the recent proceedings on Neilson's patent, to his former remark, his lordship observed that he should more correctly have said "that you take out a patent for a mode of carrying a principle into effect." But the peculiar circumstances of Jupe's patent do not seem to require any such qualification, nor was any such made in speaking of the analogous case of Clegg's invention. The occasion appears fully to explain the introduction to that qualification. In the proceedings on Neilson's patent, the learned judge was speaking of those philosophical principles which are the common property of all; in the proceedings on Jupe's patent, he was speaking of the principle of the particular invention, which was the cutting a table into four segments or sections, and causing them to diverge, and filling up the intermediate spaces so as to consti-

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[1] Jupe *v.* Pratt, Pat. Rep. 146.
[2] Pat. Rep. 103.

tute an expanding table, and which in its very terms implies that which is the subject of a patent.[1]

Questions of this nature are difficult to deal with in the abstract, but the same difficulty does not present itself in the practical form in which the question generally arises, namely, in a contest between two inventors in an action for an infringement. In such cases the question is, whether a mode subsequently invented and adopted is a substantial and independent invention, or only a colorable variation, and borrowed from the previous invention. In the determination of this question, the character of the original invention, the merit to be attributed to its author, the means by which the principle is carried out, the object of its application, and the end attained, the success and utility of the prior invention, and the comparative merits of the two inventions, are all elements for the consideration of the jury. The well-known truths of exact science, and the laws of natural science, and the properties and qualities of matter are the common property of all; the applications or adaptations of such to the various wants of man, constitute inventions which are the subject of letters-patent. But there are general truths, laws, properties, and qualities, not yet discovered; the person who discovers any such, and also applies and adapts them, is an author of a much higher order and more distinguished merit than he who applies and adapts what is already known. The property, however, which such a one can in law acquire by reason of such discovery and application, does not differ in extent from that of the preceding class. But in deciding the practical question of infringement by a subsequent invention, a very different estimation is necessarily made of the two; he who applies and adapts knowledge before in the common stock, is *primâ facie* entitled to less consideration than he who brings into the common stock the knowledge which he applies.[2] In such cases, however, it is essential that the principle should be given to the world, and also further, that the means should be fully described, and that the means, as described, should be sufficient for the purpose. It not unfrequently happens that the principle is kept back, and certain arrangements, only without any general rule, are given to the world; if this be from ignorance, the invention is merely a fortunate accident, and the merit is comparatively small, and little advantage is conferred on the public; if from design, then, though the merit may be great, the inventor does not comply with what the law requires, and moreover fails to secure his invention to the extent which he otherwise might.

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[1] See Webs. on Pat. 17. It was a question in this case, whether the specification claimed any thing in respect of the means by which the divergence was to be effected; that is, any thing beyond the mere cutting the table into four sections, which should be made to diverge, and filled up as above described in the text. See Pat. Rep. 56.

[2] This consideration, however, is again controlled by the benefit which may have been conferred on the public; that is, by the utility of the invention.

The discovery of truths of exact science, or of laws of natural science, is an event of rare occurrence, and within the opportunities and powers of few; but fresh applications of such truths and laws are of constant occurrence, and exercise the powers of a large class of individuals.[1]

But the principal source of inventions consists in the application of the known qualities of known substances. With respect to many of these the question arises, to what extent is the use or application of those substances appropriated by the inventor. This question was raised in the recent proceedings on Walton's patent[2] for improvements in cards. It had occurred to Mr. Walton that the bed in which the teeth are set requires a certain degree of elasticity and flexibility, so as to allow of the teeth yielding to any obstacle with which they meet in the operation of carding. This idea having suggested itself, the giving that elasticity and flexibility to the backs of cards, by means of caoutchouc or Indian rubber, would naturally occur to a person acquainted with the properties of that substance, and a patent was taken out for improvements in the manufacture of cards, the invention consisting in giving to the backs elasticity, derived from caoutchouc or Indian rubber. The discovery of the want of the quality of elasticity in the backs of cards, must be regarded as the important feature in this case, and it was remarked by one of the learned judges in the course of the argument, that the claim in Walton's specification was more limited than necessary; it might have been for giving the property of elasticity to the backs of cards, that not having been done before, from whatever source that elasticity is derived, and in whatever manner contributed. Such a claim, however, would, in the opinion of Mr. Baron Alderson, have amounted to a claim for a principle. In the proceedings on Neilson's case, that learned judge said, "If you claim every shape, you claim a principle. There is no difference between a principle to be carried into effect in any way you will, and claiming the principle itself. You must claim some specific mode of doing it. Then the rest is a question for the jury."[3]

The above remark is strictly applicable to the case now under consideration; in Neilson's case, the suggested claim was of hot air, to furnaces how-

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[1] The following illustration of the discovery of two laws of physics in recent times, and of the practical application of those laws, is mentioned by Mr. Carpmæl in his work on the law of patents. Dr. Faraday discovered that carbonic acid gas, under a pressure of several atmospheres, assumed a liquid form. Sir H. Davy discovered that, on the application of heat to this liquid, vapor of great expansive force was produced, which was readily condensed by contact with cold surfaces, and he was led to observe, that these properties might, probably, at no very distant period, be rendered available for working machinery. Sir M. J. Brunel subsequently invented an engine, worked by the elastic force of the vapor of condensed carbonic acid gas, by alternately bringing heat and cold to act by a peculiar arrangement for this purpose.

[2] Walton *v.* Potter, 1 Scott's N. R. 90, and Pat. Rep.

[3] See in Neilson *v.* Harford, Pat. Rep. 355.

ever applied; in Walton's case the suggested claim was of elasticity to the backs of cards from whatever source derived. The decision of the court of exchequer in Neilson's case, is an express authority that a claim of the kind last mentioned would be a claim for a principle. The court said, "It is very difficult to distinguish it from the specification of a patent for a principle, and that at first created in the minds of some of the court much difficulty; but after full consideration we think that the plaintiff does not merely claim a principle, but a machine embodying a principle, and a very valuable one too. We think the case must be considered as if, the principle being well known, the plaintiff had first invented a mode of applying it by a mechanical apparatus to furnaces; and his invention then consists in this, by interposing a receptacle for heated air between the blowing apparatus and the furnace. In this receptacle he directs the air to be heated by the application of heat externally to the receptacle, and thus he accomplishes the object of applying the blast, which was before of cold air, in a heated state, to the furnace.[1] It may, however, be asked, to what does this amount, but to an illustration of the manner in which the proviso in the letters-patent is to be complied with; namely, that the inventor shall particularly describe and ascertain the nature of his invention, and in what manner the same is to be performed. The mere announcement of the idea that a furnace should be blown with hot instead of cold air, would not in itself be the subject of letters-patent, nor would it be a compliance with the proviso as to the specification. And in the course of the argument in Neilson's case, the Lord Chief Baron observed, "Suppose it was a patent in these words: 'A patent for an invention, by which air shall be heated before it enters the furnace. I do not claim a patent either for the material or the shape; but the air must pass through a process of heating before it enters the furnace."[2] And again, "I suppose, in making the specification, he considered that it was proper to propose some mechanical illustration of his principle. But suppose he had said this: My invention, then, consists in the application of heated air to the furnace, by means of any of the methods by which air is now heated, or any other method, allowing air so heated to pass through a tube or aperture to the furnace. Probably he apprehended, that if he stated specifically any form of heating air he might then have infringed on some other patent; therefore, supposing he had said simply, My invention consists in the application of heated air by making the air pass through a heating process, before it arrives at the furnace, but I do not intend to describe the form of the receptacle; I leave that to the local circumstances and judgment of the parties to deal with such matter, stating only that the hotter you get the air the better."[3]

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[1] Neilson *v.* Harford, Pat. Rep. 371.

[2] Printed case, 4to. 181.

[3] Ibid. 185, 186.

It is impossible to read these observatiöns of the learned Chief Baron, except as a judgment that a claim to the application of hot air, in whatever manner applied, might be a good claim. And in connection with this, it is material to observe that Neilson was the first to discover the advantage resulting from the use of hot air; since so far as blast furnaces were concerned, it was generally believed that cold air was more advantageous than hot, and expensive contrivances were resorted to for keeping the blast cold, the generally observed fact of the furnaces doing better in winter than in summer, being referred to the circumstance of the air being colder; the real cause being that the air contains much less vapor in winter than in summer.

In the preceding cases of Clegg's, Jupe's, and Neilson's inventions, it must be observed that the inventor was also the discoverer of the principle, or leading feature of the invention, and this creates a material distinction between this and the other class of cases of common occurrence, in which the party is not the discoverer of the principle, but, the principle being well known, he is the inventor of its application. To a certain extent the invention in Clegg's case comes within this class; the law of natural science on which it partly rests, namely, that of the motion of a solid of less specific gravity than the fluid in which it rests, being well known. The principle of the invention, however, is more extensive than this, since it includes the alternate filling and discharging of a vessel of gas, as the remark of Mr. Baron *Alderson*, above cited, clearly shows; on the whole, therefore, in that case, the party was the discoverer of a principle as well as the inventor of the means. But several cases have occurred, in which the principle being well known, and the quality and use of the subject notorious, invention has existed in respect thereof. In these cases, inasmuch as no exclusive privileges can exist in respect of the law, property, or quality, it becomes necessary to consider the object with which, the means by which, and the end for which, the application takes place.

The proceedings on Kneller's patent[1] furnish an illustration of cases of this kind. The invention was an application of the well known law of physics, that the evaporation of a liquid is promoted by a current of air; for instance, that if the air be calm, the evaporation from the surface of water goes on slowly, compared to the evaporation which takes place when the surface is acted on by a brisk breeze, the fact being, that the evaporation is obstructed according to Dalton's views, partly by the mechanical obstructions of the particles of air, but principally by the superincumbent atmosphere of vapor; in proportion, then, as the latter is removed by the motion of the air, evaporation goes on more rapidly. The extension or modification of this general principle, by forcing air into the lower part of a liquid, for the purpose of thereby occasioning an increased evaporation, was made the sub-

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[1] Hullett *v.* Hague, 2 B & Ald. 370.

ject of experiments, which were communicated to the Royal Society in 1755, and published in their transactions.[1]

In 1822, a patent was granted to Knight and Kirk, for "a process for the more rapid crystallization, and for the evaporation of fluids at comparatively low temperatures by a peculiar mechanical application of air." The specification, having stated the general inconveniences of applying heat to fluids, described the invention to consist in propelling a quantity of heated air into the lower part of the vessel containing the liquor, and causing such heated air to pass through the whole body of the liquor, in finely divided streams, by the means of perforated pipes, coiled, or otherwise shaped and accommodated to the nature or form of the vessel through which the air from the blowing apparatus should be forced into the liquid. This invention was not brought into use, and appears to have failed altogether. In 1828, Kneller had a patent for "certain improvements in evaporating sugar, which improvements are also applicable to other purposes;" the specification declared the invention to consist in forcing, by means of bellows, or other blowing apparatus, atmospheric, or any other air, either hot or cold, through the liquid or solution subjected to evaporation, by means of pipes, whose extremities reach nearly to the upper or interior area of the bottom of the pan or boiler containing such liquid or solution.

In an action for the infringement of Kneller's patent,[2] it was urged on the part of the defendant, that Kneller claimed as an original invention, that which was but an improvement on a prior patent; but Lord *Tenterden*, C. J., and the court, sustained the patent, being of opinion that the methods described in the two specifications were essentially distinct. In applying the above decision, it must be observed that the prior invention had failed and been abandoned; at all events, it was not in use. Had the former invention succeeded, but little doubt can be entertained that in a contest between the two patents, the latter would have been held to be an infringement on the former; for it must be observed, that the object with which, and the end for which, the air was introduced, were the same in the two cases, and the variations in the means were such as would obviously suggest themselves to any mechanic, who set himself about devising different means of introducing the air. And in further confirmation of this remark, it may be observed, that in Neilson's case, though the object was the same, the detail of the means by which the result was obtained was very different, and the result attained immeasurably superior.

The uncertainty in which the preceding decisions would appear to leave the question, to what extent a principle may be secured, is more apparent than real, and no case has occurred in which letters-patent have been held to

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[1] See an account of the great benefit of blowing showers of fresh air up through distilling liquors, in the Phil. Trans. Vol. xlv. p. 312.

[2] Hullett *v.* Hague, 2 B. & Ald. 370.

be vitiated by reason of the generality of the claim. Questions of this kind can only be decided on the special facts of each case. It has been suggested,[1] that from the result of the cases it would appear that the courts are guilty of the apparent absurdity of saying, "You cannot have a patent for a principle *eo nomine*, but if you come before us in modest guise, disclaiming any right to a principle, then, if you have really invented one, we will take care individually to protect you in the exclusive enjoyment of it." But this apparent discrepancy vanishes if the distinction above suggested respecting the use of the terms be adopted. A principle *eo nomine* is but the enunciation of a proposition or fact; the principle of the invention is the embodiment of that proposition or fact in a practical form, and as such, may in some cases be insured to the inventor in its fullest extent.

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[1] See 6 Jur. 330. See also in the same work, p. 433, a notice of a case (Arnott *v.* Perry) which seems to illustrate and confirm some of the preceding remarks.

CHAPTER II.

OF THE REMEDY FOR AN INFRINGEMENT BY ACTION AT LAW.

§ 257. The Act of Congress of July 4, 1836, c. 357, § 14, provides that damages may be recovered for an infringement by "an action on the case"; a remedy which exists equally at common law, for the violation of the right secured by letters-patent.[1]

§ 258. I. *Parties.* The statute also provides that the action shall be brought in the name or names of the person or persons interested, whether as patentee, assignees, or as grantees of the exclusive right within and throughout a specified part of the United States."[2]

§ 259. Formerly, the grantee for a particular district could not bring an action on the patent in his own name.[3] But the statute has made him a party interested in the patent, and consequently in his own district, he may sue in his own name.[4]

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[1] Bull. N. P. 76.

[2] Act of July 4, 1836, c. 357, § 14. It seems that no previous notice or claim of a right to the exclusive use of an invention is necessary to enable a patentee to maintain an action for an alleged violation of his patent right. Ames *v.* Howard, 1 Sumner, 482.

[3] Tyler *v.* Tuel, 6 Cranch, 324.

[4] Such a suit may be maintained although the plaintiff is the grantee of a right to use only a limited number of the patented machines in the particular

§ 260. Where the patentee has assigned his whole interest, either before or after the patent was taken out, the action can only be brought in the name of the assignee;[1] but where the assignment is of an undivided part of the interest, the action should be brought in the joint names of the patentee and the assignee, as representing the whole interest.[2] If the assignment has not been made, but has been merely agreed to be made, the action should be in the name of the patentee, the assignee not having the interest until the assignment has been made and recorded.[3] But it may be recorded at any time after the suit is brought and before trial.[4] An action for an infringement may be maintained against a corporation.[5]

§ 261. The Supreme Court of the United States have held that a covenant by a patentee, made prior to the law authorizing extensions, that the covenantee should have the benefit of any improvement in the machinery, or alteration or renewal of the patent, did not include the extension by an administrator under the act of 1836; that it must be construed to include only renewals obtained upon the surrender of a patent on account of a defective specification, and, therefore, that a plaintiff who claimed under an assignment from the administrator could maintain a suit against a person who claimed under the covenant.[6]

§ 262. II. *The Declaration.* The declaration in an action

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district, provided it is an exclusive right, and it may be maintained against the patentee himself. Wilson *v.* Rousseau, 4 Howard, 646.

[1] Herbert *v.* Adams, 4 Mas. 15.

[2] Whittemore *v.* Cutter, 1 Gallis. 429, 430. An assignee of the exclusive right to use a certain number of machines in a certain district, may join his assignor with him in a bill for an injunction. Woodworth *v.* Wilson, 4 How. 712.

[3] Park *v.* Little, 3 Wash. 196.

[4] Pitts *v.* Whitman, 2 Story's R. 609, 614.

[5] Kneass *v.* The Schuylkill Bank, 4 Wash. 106.

[6] Wilson *v.* Rousseau, 4 Howard, 646.

for the infringement of a patent, should show a title in the plaintiff, with convenient certainty; and should set forth all the matters which are of the essence. Without these allegations, the plaintiff fails to show a right in point of law to ask the court for judgment in his favor. The several parts of the declaration may here be considered, in the order in which they occur in pleading.

§ 263. The declaration should commence with a recital that the plaintiff was "the original and first inventor" of the subject-matter, the making, using, or vending of which is complained of. This averment is necessary, notwithstanding the letters-patent, afterwards referred to, recite that the plaintiff has alleged that he was the original and first inventor, because it must appear affirmatively, in point of fact, at the trial, that he was so, and the letters-patent can only be resorted to as *prima facie* evidence of the fact. There must, therefore, be a distinct allegation of the fact, as one of the things essential to the plaintiff's title.[1]

§ 264. For the same reason, the declaration goes on to aver that the subject-matter was "new and useful," "not known or used before the plaintiff's invention or discovery," and "not at the time of his application for a patent in public use or on sale with his consent or allowance."

§ 265. Whether it is necessary to aver the citizenship of the patentee has never been determined. In practice it is generally done, and it is safer to do so, than to omit an averment which might on demurrer be held to be essential.[2] But it is absolutely

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[1] The plaintiff must affirm the performance of all acts on which his title depends. Gray *v.* James, Peters, C. C. R. 476.

[2] Mr. Phillips suggests that the necessity for this averment will depend on the construction to be given to the 15th section of the act of 1836, by which, if the patentee be an alien, the defendant is permitted to show that the

necessary to aver that the plaintiff, being the original and first inventor, obtained letters-patent for his invention, in due form of law, under the seal of the patent office, signed by the Secretary of State, and countersigned by the Commissioner of Patents.[1]

§ 266. The substance of the grant should then be set forth; that is to say, that the letters-patent secured to the plaintiff, his heirs, administrators, &c., for the term of fourteen years, the full and exclusive right of practising the invention; which should be described briefly, as it is set forth in the letters-patent, of which profert should be made.[2] Where the declaration describes the plaintiff's invention in the words of the patent, it

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patentee has "failed and neglected for the space of eighteen months from the date of the patent to put and continue on sale to the public, on reasonable terms, the invention or discovery." Phillips on Patents, p. 520, *note*. This clause in the statute can scarcely be considered as imposing a burthen of proof of citizenship on the plaintiff. It authorizes the defendant to avail himself of the fact that the plaintiff is an alien, by showing that the plaintiff has omitted to do certain acts; but is any thing more to be inferred from the clause than this, that if the defendant means to show the omission, he must first show that the plaintiff is an alien? I agree, however, with the learned author that to aver the citizenship is the safest course.

[1] Formerly, patents bore the attestation of the President of the United States; and it was held to be necessary to aver that the letters had been so tested, and that the patent had actually issued, or been delivered; otherwise, the declaration would be bad on demurrer. Cutting and others, Ex'ors. *v.* Myers, 4 Wash. 220. For the same reason, the averment is now necessary that the letters were duly tested by the public officers whose duty it is to sign and countersign them; and the mode of averring the delivery, now usually practised, is to declare that the plaintiff on such a day, "did obtain" them. But it is not necessary to aver that the preliminary steps to obtain a patent were taken, because if the declaration aver that the patent was granted in the form prescribed by law, the court, upon demurrer, will presume that every thing was rightly done to obtain it. Fulton's Ex'ors. *v.* Myers.

[2] Chit. Pl. vol. 2. Profert of the letters-patent, in the declaration, makes them and the specification, when produced, a part of the declaration, and so gives all the certainty, as to the invention and improvement patented, required by law. Pitts *v.* Whitman, 2 Story's R. 609, 614.

is not necessary, that the description, as stated in the specification, should be set forth. If the defendant require the specification in his defence, he may have it placed in the record by praying oyer of it.[1]

§ 267. The declaration is concluded by an averment of the value of the patent right and of the breach by the defendant, and the damages sustained by the plaintiff.[2]

§ 268. If the plaintiff sues in the character of assignee of the patent, he must set forth both the patentee's title and his own, and should aver that the assignments were duly recorded in the patent office. If the declaration omit to state that the assignments were recorded, the omission will be cured by verdict, if the general terms of the declaration are otherwise sufficient to have authorized the admission of proof of the recording at the trial; upon the general principle, that, after verdict, all the facts necessary to have been proved to enable the jury to find a verdict for the plaintiff, will be presumed to have been proved, if the general terms of the declaration would have let them in.[3]

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[1] Gray *v.* James, Peters's C. C. R. 476.

[2] See the Precedents in the Appendix.

[3] Dobson *v.* Campbell, 1 Sumner, 319, 326, Story, J. "We are of opinion that the motion in arrest of judgment ought to be overruled. We accede to the doctrine stated at the bar, that a defective title cannot, after verdict, support a judgment; and, therefore, it constitutes a good ground for arresting the judgment. But the present is not such a case; but is merely the case of a good title defectively set forth. The defect complained of, is the omission to state, that the assignments, on which the plaintiff's title is founded, were duly recorded in the office of the department of state, which is made essential to pass the title of the original patentee, by the fourth section of the Patent Act of the 21st of February, 1793, ch. 55. The general principle of law is, that, where a matter is so essentially necessary to be proved, to establish the plaintiff's right to recovery, that the jury could not be presumed to have found a verdict for him, unless it had been proved at the trial, there the omission to state that matter in express terms, in the declaration, is cured by the verdict, if the general terms of the declaration are otherwise sufficient to comprehend it. This was the doctrine of Lord Ellen-

§ 269. At the trial, proof may be given of the recording of an assignment, either before or after the action was brought.[1]

§ 270. III. *Pleadings and Defences.* — The fifteenth section of the Act of 1836 provides that the defendant, in any action for the infringement of a patent, shall be permitted to plead the general issue, and to give the statute and any special matter in evidence, of which notice in writing may have been given to the plaintiff or his attorney, thirty days before trial, tending to prove that the description and specification of the patent does not contain the whole truth relative to the invention or discovery, or that it contains more than is necessary to produce the described effect; which concealment or addition shall fully appear to have been made for the purpose of deceiving the public; or that the patentee was not the original and first inventor or discoverer of the thing patented, or of a substantial and material part thereof claimed as new, or that it has been described in some public work anterior to the supposed discovery by the patentee, or had been in public use, or on sale, with his consent or allowance, before his application for a patent, or that he had surreptitiously or unjustly obtained a patent for that which was in fact invented or discovered by another, who was

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borough, in *Jackson* v. *Pesked*, (1 M. & Selw. R. 234); and it is very elaborately expounded, by Mr. Sergeant Williams, in his learned note to 1 Saunders R. 228, *a*. The other authorities, cited on behalf of the plaintiff, are to the same effect. Now, it seems to us, that taking the whole declaration together, (however inartificially drawn,) the plaintiff sets up a title to the patent right by assignment, and an enjoyment and use of the right under that title, and that he has been injured in that right, under that title, by the piracy of the defendant. This cannot be true, nor could a verdict for the plaintiff have been found by the jury, if the deeds of assignment had not been duly recorded; for, unless that was done, nothing could pass by the deeds. The cases of *Hitchins* v. *Stevens*, (2 Shower R. 233,) and *McMurdo* v. *Smith*, (7 T. R. 518,) cited at the bar, seem to us very strongly in point. So is France *v.* Fringer, Cro. Jac. 44."

[1] Pitts *v.* Whitman, 2 Story, 609. Of course, therefore, it is not necessary to aver that the assignment was recorded within three months. *Ibid.*

using reasonable diligence in adapting and perfecting the same; or that the patentee, if an alien at the time the patent was granted, had failed and neglected for the space of eighteen months from the date of the patent, to put and continue on sale to the public, on reasonable terms, the invention or discovery for which the patent issued; in either of which cases, judgment is to be rendered for the defendant, with costs.

§ 271. The object of this provision was to enable the defendant to give certain special matters in evidence under the plea of the general issue. It seems to have been generally supposed, at a very early period in the history of our legislation, that under a plea of the general issue, the defendant could not be allowed to attack the validity of the patent, and that that plea only put in issue the question of infringement.[1] Accordingly, the Act of 1793 § 6, enumerated certain special defences, which it declared the defendant "shall be permitted" to give in evidence under the general issue, by first giving notice thereof to the plaintiff. The Supreme Court of the United States construed the provision as intended to relieve the defendant from what were supposed to be the difficulties of pleading, by allowing him to give in evidence, under the plea of not guilty, certain matters affecting the patent, providing, at the same time, for the security of the plaintiff against surprise, by requiring notice to be given of the special matter to be relied on. This notice was substituted for a special plea.[2] The court also declared that the defendant was not obliged to pursue this course. He might

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[1] But it was not so in England. Until the Act 5 and 6, Wm. IV., c. 83, § 5, the usual plea was *not guilty*, which, putting in issue the whole of the declaration, forced the plaintiff to support the grant in all its parts, and gave to the defendant the greatest latitude for evidence; but now the defendant must plead all the defences, and must also deliver in a list of the objections on which he intends to rely at the trial. Godson on Patents, 238, 2d ed.

[2] Evans *v.* Eaton, 3 Wheat. 454; Evans *v.* Kremer, Peters's C. C. R. 215. See also the elaborate note on the patent law in the Appendix to 3 Wheat. note II. (written by Mr. Justice Story.)

plead specially, in which case the plea would be the only notice the defendant could claim; or he might plead the general issue, in which case he must give notice of the special matter on which he relied.[1]

§ 272. The fifteenth section of the Act of 1836 is taken, with some additional defences, from the sixth section of the Act of 1793, and has the same object in view. It differs from

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[1] Evans *v.* Eaton, 3 Wheat. 454, 503. In this case, Mr. Chief Justice Marshall said: "The sixth section of the Act appears to be drawn on the idea, that the defendant would not be at liberty to contest the validity of the patent on the general issue. It, therefore, intends to relieve the defendant from the difficulties of pleading, when it allows him to give in evidence matter which does affect the patent. But the notice is directed for the security of the plaintiff, and to protect him against that surprise to which he might be exposed from an unfair use of this privilege. Reasoning, merely, on the words directing this notice, it might be difficult to define, with absolute precision, what it ought to include, and what it might omit. There are, however, circumstances in the act which may have some influence on this point. It has been already observed, that the notice is substituted for a special plea; it is farther to be observed, that it is a substitute to which the defendant is not obliged to resort. The notice is to be given only when it is intended to offer the special matter in evidence on the general issue. The defendant is not obliged to pursue this course. He may still plead specially, and then the plea is the only notice which the plaintiff can claim. If, then, the defendant may give in evidence, on a special plea, the prior use of the machine, at places not specified in his plea, it would seem to follow that he may give in evidence its use at places not specified in his notice. It is not believed that a plea would be defective, which did not state the mills in which the machinery alleged to be previously used was placed.

But there is still another view of this subject, which deserves to be considered. The section which directs this notice, also directs that if the special matter stated in the section be proved, 'judgment shall be rendered for the defendant, with costs, and the patent shall be declared void.' The notice might be intended not only for the information of the plaintiff, but for the purpose of spreading on the record the cause for which the patent was avoided. This object is accomplished by a notice which specifies the particular matter to be proved. The ordinary powers of the court are sufficient to prevent, and will, undoubtedly, be so exercised, as to prevent the patentee from being injured by the surprise."

the former act, by omitting the provision that the patent "shall be declared void," if judgment is rendered for the defendant, and by providing that "when the defendant relies in his defence on the fact of a previous invention, knowledge, or use of the thing patented, he shall state in his notice of special matter the names and places of residence of those whom he intends to prove to have possessed a prior knowledge of the thing, and where the same thing had been used." This provision was added in consequence of the construction given to the former act, to the effect that notice of the places was not necessary to be given.[1] In other respects, the construction given to the Act of 1793, § 6, is applicable to the present law. The defendant is at liberty to plead specially, in which form of pleading he need give no other notice of his defence than the plea itself gives, or he may plead the general issue, and give notice of the special matter on which he relies. The statute does not undertake to enumerate all the defences which may be made to an action on a patent. It provides that when certain facts, which it enumerates, are to be relied on, and the general issue is pleaded, the defendant shall give notice of the facts which he means to put in evidence.[2] The notice must be strictly construed; if the defendant gives notice that he will prove the prior use of the invention in the United States, he cannot be allowed to offer evidence of its prior use in England.[3]

§ 273. But it will be useful to make a particular enumeration of the defences that may be made under the general issue, without notice, before we turn our attention to those mentioned in the statute, of which notice must be given, when the general issue is pleaded.

§ 274. The defendant may show, under the general issue,

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[1] Evans *v.* Eaton, *ante*, note; Evans *v.* Kremer, Peters's C. C. R. 215.

[2] Whittemore *v.* Cutter, 1 Gallis. 429, 435; Grant *v.* Raymond, 6 Peters, 218.

[3] Dixon *v.* Moyer, 4 Wash. 68.

without notice, that he never did the act complained of, that is, that he has not infringed the patent, or that he was acting under a license or purchase from the plaintiff.[1] He may show that the plaintiff is an alien, not entitled to a patent; or that the plaintiff has not a good title as assignee; or that his patent was not duly issued according to law, in respect of the signatures of the public officers, or of the public seal, &c.[2]

§ 275. He may also show that the invention is not a patentable subject; that is to say, admitting its novelty, he may show that it is not an "art, machine, manufacture, or composition of matter," in the sense of the statute.[3] But the defence that the subject is not patentable on the ground of want of novelty, falls under the statute, and must be specified.

§ 276. In like manner, the defendant may show, under the general issue, without notice, that the invention, though new, fails in point of utility, and is worthless and frivolous.[4]

§ 277. So, too, he may show that there is no specification, or that the specification is so ambiguous and unintelligible that the court cannot determine from it, what the invention is that is intended to be patented. This is a different issue from that pointed out in the statute. If the specification do not describe the invention in clear and exact terms, so as to distinguish it

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[1] Whittemore *v.* Cutter, 1 Gallis. 429, 435; 3 Wheaton's R. Appendix, Note II. p. 27.

[2] Ibid. Kneass *v.* The Schuylkill Bank, 4 Wash. 9, 11.

[3] That the invention is not a patentable subject, admitting its novelty, is a different issue from any that is named in the 15th section of the statute, and it is one that is necessarily raised by the plea of "*not guilty*," since the declaration necessarily imports that the patentee had invented a patentable subject.

[4] Want of novelty is one of the defences enumerated in the 15th section, but want of utility is not; but it is a clear bar to the action, upon the terms of the act, as well as upon the general principles of law.

from other inventions, but be so ambiguous and obscure that it cannot be ascertained with reasonable certainty for what the patent is taken, or what it includes, the patent is void for ambiguity; and this is put in issue by the plea of not guilty, because a clear and distinct specification of the invention is essential to the validity of the patent.[1] But if the invention is definitely described in the patent and specification, so as to distinguish it from other inventions before known, there may still exist the defect described in the fifteenth section of the statute, of some concealment or addition made for the purpose of deceiving the public; and when it is intended to show this, under the general issue, notice must be given.

§ 278. We now come to the special defences enumerated in the fifteenth section of the statute. The statute provides that the defendant may, under the general issue, give the statute itself in evidence,[2] and certain special matters, of which he shall have given notice in writing to the plaintiff or his attorney thirty days before trial.[3]

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[1] 3 Wheat. R. Appendix, note II. p. 27; Phillips on Patents, p. 398; Kneass *v.* The Schuylkill Bank, 4 Wash. 9, 13. In this last case, Mr. Justice Washington intimates that the defendant may show under the general issue, and without notice that the patent is broader than the discovery. But this must now be otherwise; since the 15th section of the Act of 1836 describes one of the issues which require notice, to be that the patentee was not the original and first inventor of the thing patented, *or of a substantial and material part thereof*. This is the issue that the patent is broader than the invention.

[2] The meaning of the permission to give the statute in evidence is, that the defendant shall be allowed to rely on any matter of law enacted in the statute, without pleading it specially, which must be done when the statute is a private one. The patent act is undoubtedly a public act; but from abundant caution, to prevent the question of the nature of the act from being raised, this provision was inserted. Kneass *v.* The Schuylkill Bank, 4 Wash. 9, 11.

[3] No witness can be examined, to prove a prior use of the invention, unless notice of his name and residence has been given. The Philadelphia and Trenton Railroad Company *v.* Thompson, 14 Peters, 448, 459.

§ 279. The first of these special defences is, "that the description and specification filed by the plaintiff, does not contain the whole truth relative to his invention or discovery, or that it contains more than is necessary to produce the described effect; which concealment or addition shall fully appear to have been made for the purpose of deceiving the public." We have already seen what was the general purpose of Congress in providing that notice should be given, when certain facts were to be offered in evidence; but it is not very easy to define the scope of the issue intended by the above provision, or to distinguish the exact meaning of the statute in this particular. It is clear, however, that this issue, as we have already suggested, is distinguishable from the issue, which presents the naked question whether there is an intelligible description of the invention, which will enable the public to know what it is. It may help us to understand the present provision, if we review the corresponding provision in the former Act, and the decisions made upon it.

§ 280. The corresponding provision in the Act of 1793, § 6, was in the same terms, but that act also provided that when judgment on this issue had been rendered for the defendant, "the patent shall be declared void;" which is omitted in the Act of 1836, § 15. In one of the earliest reported cases in which this clause of the statute of 1793 came under consideration, Mr. Justice Story held that if the invention is definitely described in the patent and specification, so as to distinguish it from other inventions before known, the patent is good, although it does not describe the invention in such full, clear, and exact terms, that a person skilled in the art or science, of which it is a branch, would construct or make the thing, *unless such defective description or concealment was with intent to deceive the public.* The reasoning of the learned judge, in this case, tends to show that he considered the defect or concealment, with intent to deceive the public, to refer to the practicability of practising the invention from the specification; and in a subse-

quent case he seems to consider that the statute intended to alter the common law, and to declare the patent void, only when the concealment or defect was with such an intent. But it is not quite clear, whether he considered that the issue raised by an allegation that the specification would not enable a workman to make the thing described, is, as a defence to the action, not one of the special defences of the statute, and consequently that it is raised by the plea of not guilty, without notice.[1]

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[1] Whittemore *v.* Cutter, 1 Gallis. 429, 433; Lowell *v.* Lewis, 1 Mas. 182, 187. The reasoning of the learned judge in both these cases was as follows: "Another objection is to the direction, that the oath taken by the inventor, not being conformable to the statute, formed no objection to the recovery in this action. The statute requires that the patentee should swear 'that he is the true inventor or discoverer of the art, machine, or improvement.' The oath taken by Whittemore was, that he was the true *inventor* or *improver* of the machine." The taking of the oath was but a prerequisite to the granting of the patent, and in no degree essential to its validity. It might as well have been contended, that the patent was void, unless the thirty dollars, required by the 11th section of the act, had been previously paid. We approve of the direction of the court on this point, and overrule this objection.

Another objection is to the direction respecting the specification. It was as follows: "That if the jury should be satisfied, that the specification and drawings, filed by the patentee in the office of the Secretary of State, were not made in such full, clear, and exact terms and manner as to distinguish the same from all other things before known, and to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make and use the same, this would not be sufficient to defeat the rights of the plaintiffs to recover in this action, unless the jury were also satisfied, that the specification and drawings were thus materially defective and obscure *by design*, and the concealment made for the purpose of deceiving the public. In this respect our law differed from the law of England, that if the specification and drawings were thus materially defective, it afforded a presumption of a designed concealment, which the jury were to judge of. That in deciding as to the materiality of the deficiencies in the specification and drawings, it was not sufficient evidence to disprove the materiality, that, by studiously examining such specification and drawings, a man of extraordinary genius might be able to construct the machine, by inventing parts, and by trying experiments. The object of the law was, to prevent the expenditure of time and money in trying experiments, and to obtain such exact directions, that, if properly followed, a man

§ 281. In a subsequent case, the Supreme Court of the United States decided that in order to justify a judgment declaring a

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of reasonable skill in the particular branch of the art or science might construct the machine, and if, from the deficiencies, it was impracticable for such a man to construct it, the deficiencies were material." In order fully to understand the objection to this direction, it is necessary to advert to the third section of the Act of 1793, which specifies the requisites to be complied with in procuring a patent, and the sixth section of the same act, which states certain defences, of which the defendant may avail himself to defeat the action, and to avoid the patent. The third section, among other things, requires the party applying for a patent, to deliver a written description of his invention, and of the manner of using, or process of compounding the same, in such full, clear, and exact terms, as to distinguish the same from all other things before known, and to enable any person skilled in the art or science of which it is a branch, or with which it is most intimately connected, to make, compound, and use the same; and in the case of any machine, he shall fully explain the principle, and the several modes, in which he has contemplated the application of that principle, or character, by which it may be distinguished from other inventions. The sixth section provides, among other things, that the defendant may give in his defence, that the specification filed by the plaintiff does not contain the whole truth relative to his discovery, or that it contains more than is necessary to produce the described effect, *which concealment or addition shall fully appear to have been made for the purpose of deceiving the public.*

It is very clear, that the sixth section does not enumerate all the defences, of which the defendant may legally avail himself: for he may clearly give in evidence, that he never did the act attributed to him, that the patentee is an alien not entitled under the act, or that he has a license or authority from the patentee. It is, therefore, argued, that if the specification be materially defective, or obscurely or so loosely worded, that a skilful workman in that particular art could not construct the machine, it is a good defence against the action, although no intentional deception has been practised. And this is beyond all question the doctrine of the common law; and it is founded in good reason; for the monopoly is granted upon the express condition, that the party shall make a full and explicit disclosure, so as to enable the public, at the expiration of his patent, to make and use the invention or improvement in as ample and beneficial a manner, as the patentee himself. If, therefore, it be so obscure, loose, and imperfect, that this cannot be done, it is defrauding the public of all the consideration upon which the monopoly is granted. (Buller, N. P. 77; Turner *v.* Winter, 1 T. R. 602.) And the motion of the party, whether innocent or otherwise, becomes immaterial, because the public mischief remains the same.

patent void, the defect or concealment must appear to have been made for the purpose of deceiving the public; but if the

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It is said, that the law is the same in the United States, notwithstanding the wording of the sixth section, for there is a great distinction between a concealment of material parts, and a defective and ambiguous description of all the parts; and that, in the latter case, although there may be no intentional concealment, yet the patent may be avoided for uncertainty as to the subject-matter of it. There is considerable force in the distinction at first view; and yet, upon more close examination, it will be difficult to support it. What is a defective description, but a concealment of some parts, necessary to be known in order to present a complete view of the mechanism? In the present case the material defects were stated, among other things, to consist in a want of a specific description of the dimensions of the component parts, and of the shapes and position of the various knobs. Were these a concealment of material parts, or a defective and ambiguous disclosure of them? Could the legislature have intended to pronounce, that the concealment of a material spring should not, unless made with design to deceive the public, avoid the patent, and yet that an obscure description of the same spring should at all events avoid it? It would be somewhat hazardous to attempt to sustain such a proposition.

It was probably with a view to guard the public against the injury arising from defective specifications, that the statute requires the letters-patent to be examined by the Attorney-general, and certified to be in conformity to the law, before the great seal is affixed to them. In point of practice this must unavoidably be a very insufficient security, and the policy of the provision, that has changed the common law, may be very doubtful. This, however, is a consideration proper before another tribunal. We must administer the law as we find it. And, without going at large into this point, we think that the manifest intention of the legislature was, not to allow any defect or concealment in a specification to avoid the patent, unless it arose from an intention to deceive the public. There is no ground, therefore, on which we can support this objection." 1 Gallis. 433.

"An objection of a more general cast (and which might more properly have been considered at the outset of the cause, as it is levelled at the sufficiency of the patent itself,) is, that the specification is expressed in such obscure and inaccurate terms, that it does not either definitely state in what the invention consists, or describe the mode of constructing the machine so as to enable skilful persons to make one. I accede at once to the doctrine of the authority, which has been cited, (M'Farlane *v.* Price, 1 Starkie's R. 192,) that the patentee is bound to describe, in full and exact terms, in what his invention consists; and, if it be an improvement only upon an existing machine, he should distinguish what is new and what is old in his specifica-

defendant merely seeks to defend himself, he may do so by showing that the patentee has failed in any of the pre-requisites

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tion, so that it may clearly appear for what the patent is granted. The reason of this principle of law will be manifest on the slightest examination. A patent is grantable only for a new and useful invention; and unless it be distinctly stated, in what that invention specifically consists, it is impossible to say, whether it ought to be *patented or not*; and it *is equally difficult* to know whether the public infringe upon or violate the exclusive right secured by the patent. The patentee is clearly not entitled to include in his patent the exclusive use of any machinery already known; and if he does, his patent will be broader than his invention, and consequently void. If, therefore, the description in the patent mixes up the old and the new, and does not distinctly ascertain for which, in particular, the patent is claimed, it must be void; since, if it covers the whole, it covers too much, and if not intended to cover the whole, it is impossible for the court to say what, in particular, is covered as the new invention. The language of the patent act itself is decisive on this point. It requires (§ 3) that the inventor shall deliver a written description of his invention, "in such full, clear, and exact terms, as to distinguish the same from all other things before known; and in the case of any machine, he shall fully explain the principle, and the several modes, in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions."

It is, however, sufficient, if what is claimed as new appear with reasonable certainty on the face of the patent, either expressly or by necessary implication. But it ought to appear with reasonable certainty, for it is not to be left to *minute* references and conjectures, from what was previously known or unknown; since the question is not, what was before known, but what the patentee claims *as new;* and he may, in fact, claim as new and patentable, what has been long used by the public. Whether the invention itself be thus specifically described with reasonable certainty, is a question of law upon the construction of the terms of the patent, of which the specification is a part; and on examining this patent I at present incline to the opinion, that it is *sufficiently* described, *in* what the patented invention consists.

A question nearly allied to the foregoing, is, whether (supposing the invention itself be truly and definitely described in the patent) the specification is in such full, clear, and exact terms, as not only to distinguish the same from all things before known, but "to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same." This is another requisite of the statute, (§ 3,) and it is founded upon the best reasons. The law confers an exclusive patent right on the inventor of any thing new and use-

on which the authority to issue a patent depends. This decision made the evidence of fraudulent intent requisite only in the particular case and for the particular purpose of having the patent declared void.[1]

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ful, as an encouragement and reward for his ingenuity, and for the expense and labor attending the invention. But this monopoly is granted for a limited term only, at the expiration of which the invention becomes the property of the public. Unless, therefore, such a specification was made, as would at all events enable other persons, of competent skill, to construct similar machines, the advantage to the public, which the act contemplates, would be entirely lost, and its principal object would be defeated. It is not necessary, however, that the specification should contain an explanation, level with the capacities of every person (which would, perhaps, be impossible); but, in the language of the act, it should be expressed in such full, clear, and exact terms, that a person skilled in the art or science, of which it is a branch, would be enabled to construct the patented invention. By the common law, if any thing material to the construction of the thing invented, be omitted, or concealed, in the specification, or more be inserted or added, than is necessary to produce the required effect, the patent is void. This doctrine of the common law our patent act has (whether wisely, admits of very serious doubts,) materially altered; for it does not avoid the patent in such case, unless the "concealment or addition shall fully appear to have been made for the purpose of deceiving the public." (§ 6.) Yet, certainly, the public may be as seriously injured by a materially defective specification resulting from mere accident, as if it resulted from a fraudulent design. Our law, however, is as I have stated; and the question here is, and it is a question of fact, whether the specification be so clear and full, that a pump-maker of ordinary skill, could, from the terms of the specification, be able to construct one upon the plan of Mr. Perkins." 1 Mas. 187.

[1] Grant *v.* Raymond, 6 Peters, 218, 246. Mr. C. J. Marshall, delivering the judgment of the court in this case, said, "Courts did not, at first, perhaps, distinguish clearly between a defence which would authorize a verdict and judgment in favor of the defendant in the particular action, leaving the plaintiff free to use his patent, and to bring other suits for its infringement; and one which, if successful, would require the court to enter a judgment not only for the defendant in the particular case, but one which declares the patent to be void. This distinction is now well settled.

If the party is content with defending himself, he may either plead specially, or plead the general issue, and give the notice required by the sixth section of any special matter he means to use at the trial. If he shows

§ 282. Now the statute of 1836 omits the provision that the patent shall be declared void, when judgment is rendered for

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that the patentee has failed in any of those pre-requisites on which the authority to issue the patent is made to depend, his defence is complete. He is entitled to the verdict of the jury and the judgment of the court. But if, not content with defending himself, he seeks to annul the patent, he must proceed in precise conformity to the sixth section. If he depends on evidence, "tending to prove that the specification filed by the plaintiff does not contain the whole truth relative to his discovery, or that it contains more than is necessary to produce the described effect," it may avail him so far as respects himself, but will not justify a judgment declaring the patent void, unless such "concealment or addition shall fully appear to have been made for the purpose of deceiving the public;" which purpose must be found by the jury to justify a judgment of *vacatur* by the court. The defendant is permitted to proceed according to the sixth section, but is not prohibited from proceeding in the usual manner, so far as respects his defence; except that special matter may not be given in evidence on the general issue unaccompanied by the notice which the sixth section requires. The sixth section is not understood to control the third. The evidence of fraudulent intent is required only in the particular case, and for the particular purpose stated in the sixth section.

This instruction was material if the verdict ought to have been for the defendants, provided the allegations of the plea were sustained, and if such verdict would have supported a judgment in their favor, although the defect in the specification might not have arisen from design, and for the purpose of deceiving the public. That such is the law we are entirely satisfied. The third section requires, as preliminary to a patent, a correct specification and description of the thing discovered. This is necessary in order to give the public, after the privilege shall expire, the advantage for which the privilege is allowed and is the foundation of the power to issue the patent. The necessary consequence of the ministerial character in which the secretary acts, is that the performance of the pre-requisites to a patent must be examinable in a suit brought upon it. If the case was of the first impression we should come to this conclusion; but it is understood to be settled.

The act of Parliament concerning monopolies contains an exception on which the grants of patents for inventions have issued in that country. The construction of so much of that exception as connects the specification with the patent, and makes the validity of the latter dependent on the correctness of the former, is applicable, we think, to proceedings under the third section of the American act. The English books are full of cases in which it has been held that a defective specification is a good bar when pleaded to,

the defendant, and it leaves the ground of a concealment or addition in the specification, with intent to deceive the public, simply a defence to the action, of a special nature. There can be no doubt, therefore, that when the defendant proposes to show that the specification contains more or less than a true description of the invention, and that the concealment or addition was made for the purpose of deceiving the public, his plea

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or a sufficient defence when given in evidence on the general issue, on an action brought for the infringement of a patent right. They are very well summed up in Godson's Law of Patents, title Specification ; and also in the chapter respecting the infringement of patents, also in Holroyd on Patents, where he treats of the specification, its form and requisites. It is deemed unnecessary to go through the cases, because there is no contrariety in them, and because the question is supposed to be substantially settled in this country. Pennock & Sellers *v.* Dialogue, 1 Peters, 1, was not, it is true, a case of defect in the specification or description required by the third section, but one in which the applicant did not bring himself within the provision of the first section, which requires that before a patent shall issue, the petitioner shall allege that he has invented a new and useful art, machine, &c., "*not known or used before the application.*" This pre-requisite of the first section, so far as a failure in it may affect the validity of the patent, is not distinguishable from a failure of the pre-requisites of the third section.

On the trial evidence was given to show that the patentee had permitted his invention to be used before he took out his patent. The court declared its opinion to the jury, that if an inventor makes his discovery public, he abandons the inchoate right to the exclusive use of the invention. "It is possible," added the court, "that the inventor may not have intended to give the benefit of his discovery to the public." But it is not a question of intention, "but of legal inference, resulting from the conduct of the inventor, and affecting the interests of the public. It is for the jury to say whether the evidence brings this case within the principle which has been stated. If it does, the court is of opinion that the plaintiff is not entitled to a verdict."

The jury found a verdict for the defendants, an exception was taken to the opinion, and the judgment was affirmed by this court. This case affirms the principle that a failure on the part of the patentee, in those pre-requisites of the act which authorize a patent, is a bar to a recovery in an action for its infringement; and that the validity of this defence does not depend on the intention of the inventor, but is a legal inference upon his conduct."

must either be special, setting forth the defects and charging the intent, or it must be the general issue, accompanied by notice of the defects in the specification intended to be relied on. But I do not conceive that the statute means to say that no concealment or defect in a specification shall be available as a defence to the action, under the general issue, unless it was made with intent to deceive the public. The statute may be construed as if it read thus: "Whenever the defendant seeks to show that the specification does not contain the whole truth relative to the invention or discovery, or that it contains more than is necessary to produce the described effect, and that such concealment or addition was made for the purpose of deceiving the public, he may plead the general issue, and give such special matter in evidence, provided he shall have given notice," &c. On the other hand, if the defendant relies on a failure in the specification in respect of any of the pre-requisites for issuing a patent, he may show such failure, under a plea of the general issue, without any notice.

§ 283. The next special defence mentioned in the statute is, in substance, that the subject-matter is not new; that is, "that the patentee was not the original and first inventor or discoverer of the thing patented, or of a substantial and material part thereof, claimed as new; or that it had been described in some public work, anterior to the supposed discovery thereof by the patentee." [1]

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[1] When this defence is relied upon, it will be incumbent on the defendant to show that the invention had been known, used, or described in a public work, *anterior to the supposed discovery of the patentee*. The plaintiff's right in his invention, therefore, relates back to the original discovery, which may be proved by parol, and is not necessarily presumed to have been made on the day when the patent issued; although the infringement must have taken place after the date of the patent. Dixon *v.* Moyer, 4 Wash. 68, 72. The conversations and declarations of a patentee merely affirming that at some former period he had invented a machine, may well be objected to. But his conversations and declarations, stating that he had made an invention, and describing its details, and explaining its operations, are properly deemed an

§ 284. We have seen, in a former chapter of this work, when a party is or is not the original and first inventor of a patented subject; and also that a failure, in point of novelty, of any substantial and material part of the alleged invention, renders the patent void *pro tanto*. In order to ensure the plaintiff against surprise, whenever this defence is to be resorted to, the same section of the statute requires that the defendant "shall state, in his notice of special matter, the names and places of residence of those whom he intends to prove to have possessed a prior knowledge of the thing, and where the same had been used." This provision must be strictly complied with.[1]

§ 285. It is also fairly to be inferred, from the requisition, that notice shall be given of "any special matter" intended to be offered in evidence "tending to prove" the particular defence relied upon, that the notice must describe whether the whole, or a part, and what part of the invention is to be charged with want of novelty, and in what public work or works, the whole, or a part, or what part had been described before the supposed discovery by the patentee. There is no limitation of time within which this defence must be set up.[2]

§ 286. The stringent effect of this defence has been materially modified, however, by two other provisions. The first is contained in the two provisions which are found at the end of the same fifteenth section of the Act of 1836; "provided that

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assertion of his right, at that time, as an inventor, to the extent of the facts and details which he then makes known, although not of their existence at an anterior time. Such declarations, coupled with a description of the nature and objects of the invention, are to be deemed part of the *res gestæ*, and they are legitimate evidence that the invention was then known and claimed by him; and thus its origin may be fixed, at least, as early as that period. The Philadelphia and Trenton Railroad Co. *v.* Thompson, 14 Peters, 448.

[1] Ibid.

[2] Evans *v.* Eaton, Peters's C. C. R. 322, 348.

whenever it shall satisfactorily appear that the patentee, at the time of making his application for the patent, believed himself to be the first inventor or discoverer of the thing patented, the same shall not be held to be void, on account of the invention or discovery, or any part thereof having been before known or used in any foreign country, it not appearing that the same or any substantial part thereof had before been patented or described in any printed publication; *and, provided also,* that whenever the plaintiff shall fail to sustain his action, on the ground that in his specification of claim is embraced more than that of which he was the first inventor, if it shall appear that the defendant had used or violated any part of the invention justly and truly specified, and claimed as new, it shall be in the power of the court to adjudge and award, as to costs, as may appear to be just and equitable."

§ 287. The other provision is contained in the Act of March 3, 1837, § 7, 9, in relation to a disclaimer. The seventh section enacts as follows: "That, whenever any patentee shall have, through inadvertence, accident, or mistake, made his specification of claim too broad, claiming more than that of which he was the original or first inventor, some material and substantial part of the thing patented, being truly and justly his own, any such patentee, his administrators, executors, and assigns, whether of the whole or of a sectional interest therein, may make disclaimer of such parts of the thing patented, as the disclaimant shall not claim to hold by virtue of the patent or assignment, stating therein the extent of his interest in such patent; which disclaimer shall be in writing, attested by one or more witnesses, and recorded in the patent office, on payment by the person disclaiming in manner as other patent duties are required by law to be paid, of the sum of ten dollars. And such disclaimer shall thereafter be taken and considered as part of the original specification, to the extent of the interest which shall be possessed in the patent or right secured thereby, by the disclaimant, and by those claiming by or under him sub-

sequent to the record thereof. But no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing the same."

§ 288. The ninth section is as follows: "Be it further enacted, any thing in the fifteenth section of the act to which this is additional to the contrary, notwithstanding, that, whenever by mistake, accident, or inadvertence, and without any wilful default, or intent to defraud or mislead the public, any patentee shall have in his specification claimed to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for so much of the invention or discovery as shall be truly and *bonâ fide* his own: *Provided*, it shall be a material and substantial part of the thing patented, and be definitely distinguishable from the other parts so claimed without right as aforesaid. And every such patentee, his executors, administrators, and assigns, whether of the whole or a sectional interest therein, shall be entitled to maintain a suit at law or in equity, on such patent for any infringement of such part of the invention or discovery as shall be *bonâ fide* his own as aforesaid, notwithstanding the specification may embrace more than he shall have any legal right to claim. But, in every such case in which a judgment or verdict shall be rendered for the plaintiff, he shall not be entitled to recover costs against the defendant, unless he shall have entered at the patent office, prior to the commencement of the suit, a disclaimer of all that part of the thing patented which was so claimed without right; *Provided, however*, that no person bringing any such suit shall be entitled to the benefit of the provisions contained in this section, who shall have unreasonably neglected or delayed to enter at the patent office a disclaimer as aforesaid." [1]

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[1] In Reed *v.* Cutter, 1 Story, 590, 600, Mr. Justice Story said: "In

§ 289. The result of these various enactments is, that for so much of the invention as has been described in some public work anterior to the supposed discovery by the patentee, whether the description was known to him in point of fact, or not, — if it be a substantial and material part of the thing invented, and be claimed as new, — and for so much as had been previously patented, the patent is inoperative. But the mere previous knowledge or use of the thing in a foreign country will not defeat a patent here, issued to an original inventor, provided it had not been previously patented or described in a printed publication.

§ 290. It will be observed, that the same statute uses different phraseology in describing the kind of publication which is to have this effect. In the body of the 15th section of the Act of 1836, it is declared to be a description in "some public work;" and in the proviso of the same section it is declared to be "any printed publication." This renders it somewhat doubtful, as to what kind of publication is intended. The phrase "some public work" would seem to point to a class of regular established publications, or to some book publicly printed and circulated, so as to be open to the public; while the phrase "any printed publication" is broad enough to include any description printed in any form and published or circulated to

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respect to another point, stated at the argument, I am of opinion, that a disclaimer, to be effectual for all intents and purposes, under the Act of 1837, ch. 45, (§ 7 and 9) must be filed in the patent office before the suit is brought. If filed during the pendency of the suit, the plaintiff will not be entitled to the benefit thereof in that suit. But if filed before the suit is brought, the plaintiff will be entitled to recover costs in such suit, if he should establish, at the trial, that a part of the invention, not disclaimed, has been infringed by the defendant. Where a disclaimer has been filed, either before or after the suit is brought, the plaintiff will not be entitled to the benefit thereof, if he has unreasonably neglected or delayed to enter the same at the patent office. But such an unreasonable neglect or delay will constitute a good defence and objection to the suit.

any extent and in any manner. Taking the whole section together, however, and looking to the apparent policy of the statute, it is probable that the intention of Congress was, to make it a conclusive presumption that the patentee had seen any printed description of the thing, which had been so printed and published as to be accessible to the public; but not to adopt that presumption in cases of printed descriptions published and circulated in such a manner as not to be accessible either to the public or to him. If the presumption were adopted in cases of the latter class of publications, an original and meritorious inventor might be defeated of his patent, by showing that the thing had, in a foreign country, been privately described in a printed paper published to a single individual; which certainly would not be a description in a "public work," although it would be a description in a "printed publication." When it is considered that the statute excepts cases even where the thing had been known or used abroad, provided it had not been patented, or described in any printed publication, it seems reasonable to suppose that the publication intended is one to which the public could have access; and this construction is fortified by the consideration that the defence enacted in this section, to which the proviso establishes the exception is, that the thing had been described in "some public work." [1]

§ 291. If this be so, it would seem to be a question for the

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[1] The statute of 1799, § 6, used only the phrase "described in some public work," and did not contain the proviso introduced into the act of 1836. Marshall, C. J., in Evans *v.* Eaton, 3 Wheat. 454, 514, commenting on the former statute, said, "It may be that the patentee had no knowledge of this previous use or previous description; still his patent is void; *the law supposes he may have known it.*" It is, therefore, by adopting a presumption of knowledge, that the law declares the patent void. But there could be no reason or justice in adopting such a presumption, in cases where the printed description had not come into the possession of the public; and it is manifest that the former statute did not mean to adopt it in such cases, since it uses only the phrase "public work."

jury, under all the circumstances under which the publication has taken place, to determine whether the description was so printed and published, as to be accessible to the public, where the publication took place. If it was so accessible, the presumption is against the patentee, and his patent will be defeated, notwithstanding he may not have seen it; because the description was already in the possession of the public.

§ 292. What, then, constitutes a "description?" No judicial construction has yet been given to this term. It can scarcely be supposed, however, that a mere suggestion of the possibility of constructing the machine, or other thing, which may have been subsequently patented, is what the statute intends. The reason why the statute adopts the presumption of knowledge, on the part of the subsequent patentee, is, that a knowledge of the thing was already in the possession of the public. It makes knowledge and the means of knowledge on the part of the public the same thing; and acting upon this principle, it holds that the public have acquired nothing from the specification of the patentee, which they did not possess before, and that the patentee has invented nothing, which he, as one of the public, could not have derived from the means of knowledge which the public before possessed.[1] Hence it is, that the production of a prior description, which was in the possession of the public, negatives the title of the patentee as the first inventor. But it follows necessarily, from this view of the principle on which the law proceeds, that the description must be such as to give the public the means of knowledge, or, in other words, must of itself enable the public to practise the invention. It is not necessary that the invention should have been reduced to practice; but unless the description would enable the public, without further invention to put the thing in practice, it cannot be said that a

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[1] A man cannot be said to be the inventor of that which has been exposed to public view, and which he might have had access to if he had thought fit." Lord Abinger, C. B. in Carpenter *v.* Smith, Webs. Pat. Cas. 535.

knowledge of that thing is in the possession of the public. Accordingly, it has been laid down by two eminent writers on the patent law, that the description which is to have the effect of defeating a subsequent patent, ought to approach the character, and in some degree to answer the purposes of a specification, by serving as a direction for making, doing, or practising the thing which is the subject of the patent.[1] But mere speculations or suggestions of an experimental kind, not stated in such a way as to serve for a practical direction, are entirely analogous in their character to abortive and unsuccessful experiments in practice. The Marquis of Worcester's Century of Inventions contained many hints and speculations, on which subsequent inventors have acted; but as they were the mere speculations of an ingenious man, not reduced by him to practice, and not so stated, that the statement would answer for a rule of working, without the exercise of invention on the part of the public, they have not been held to have defeated the patents to which they gave rise.[2]

§ 293. The defendant, therefore, to return to the considera-

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[1] Phillips on Patents, p. 175. Mr. Webster (Pat. Cas. 719, note,) says, "But whatever may be the peculiar circumstances under which the publication takes place, the account so published, to be of any effect in law as a publication, must, on the authority of the principal case, be an account of a complete and perfect invention, and published as such. If the invention be not described and published as a complete, perfected, and successful invention, but be published as an account of some experiment, or by way of suggestion and speculation, as something which, peradventure, might succeed, it is not such an account as will vitiate subsequent letters-patent. It would appear to be a test not wholly inapplicable to cases of this nature, to inquire whether what is so published would be the subject of letters-patent, because, inasmuch as that which rests only in experiment, suggestion, and speculation, cannot be the subject of letters-patent, it would be unreasonable that what could not be the subject of letters-patent, supposing letters-patent granted in respect thereof, should vitiate letters-patent properly granted."

[2] See the observations of Lord Abinger, C. B., in Carpenter *v.* Smith, Webs. Pat. Cas. 534.

tion of this defence, — who gives notice of the statute defence of want of novelty, will not be defeated in it, if he proves a material part of the invention to have been known or used before the discovery by the patentee, provided he shows that the specification was made broader than the real discovery of the plaintiff, with " wilful default or intent to defraud or mislead the public." But if it was made broader than the real discovery, through accident or inadvertence, the patent will still be good, and an action may be maintained for so much of the invention or discovery as is *bonâ fide* the invention or discovery of the patentee, provided it is a material and substantial part of the thing patented, and is definitely distinguishable from the other part which the patentee had no right to claim; unless there has been an unreasonable neglect or delay to file the disclaimer.[1] No cost however, can be recovered in such an action, unless the plaintiff, before bringing his action, has filed in the patent office a disclaimer of all that part of the thing patented which his original specification should not have claimed. If the disclaimer is filed before the action is brought, but the entry of it at the patent office has been unreasonably neglected or delayed, the defence of a want of novelty in any material respect, from whatever cause the defect in the original specification arose, will be admitted as a bar to the action; and the question of unreasonable neglect or delay will be a question of law for the court.

§ 294. Of course a defence which goes to the originality of a material and substantial part of the thing patented, the essence of the plaintiff's invention, as is most frequently the case, will not be affected by these provisions.

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[1] It seems that the 9th section was intended to cover inadvertences and mistakes of law, as well as of fact; and, therefore, a claim of an abstract principle would be within its provisions. Wyeth *v.* Stone, 1 Story's R. 273, 295. See further as to Disclaimer, *ante*.

§ 295. Care is to be taken, therefore, in framing this defence, to ascertain, in the first place, whether the whole or only a part of the substance of the thing patented is open to the objection of prior use or knowledge; and in the second place, whether a disclaimer has been filed. If a disclaimer has been filed in reasonable time, the defence of a want of novelty that goes only to a part of the thing patented, and still leaves a material and substantial part unaffected by the objection, will not be an answer to the action, but will simply prevent the recovery of costs. But a defence which goes to the originality of the whole patent, and leaves nothing new that is material and substantial, and capable of distinction as the subject-matter of the plaintiff's invention, will be an answer to the action, notwithstanding any disclaimer. It is obviously necessary, therefore, to specify in the notice of defence the particular parts of the thing patented which it is intended to attack.[1]

§ 296. Another of the statute defences is that the patentee had allowed his invention to become public, before his application for a patent, or, as it is expressed in the statute, that it "had been in public use, or on sale, with the consent or allowance of the patentee before his application for a patent." This provision is intended to embody the defence of an abandonment or dedication to the public of his invention by the patentee, prior to his application for a patent. The question whether a patentee by any and what degree of use of his invention before his application for a patent, could lose his inchoate right in the thing invented, and not be able afterwards to resume it at his pleasure, arose before the statute of 1836 was passed, and the Supreme Court of the United States declared that an inventor might undoubtedly abandon his invention, and surrender or dedicate it to the public; and that the question

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[1] See further an elaborate construction of the 7th and 9th sections, as to a disclaimer, in the opinion of Mr. Justice Story, in the case of Wyeth *v.* Stone, 1 Story's R. 273.

which generally arises is, whether the acts or acquiescence of the party, furnish, in the given case, satisfactory proof of such an abandonment or dedication to the public. The court held that the true construction of the then existing law was, that the first inventor cannot acquire a good title to a patent, if he suffers the thing invented to go into public use, or to be publicly sold for use, before he makes application for a patent; that such a voluntary act, or acquiescence in the public sale or use, is an abandonment of his right; or rather creates a disability to comply with the terms and conditions of the law, on which alone the public officer is authorized to grant a patent.[1] In a more recent case, the same court re-affirmed this construction of the patent laws, and held that the right of an alien patentee was vacated in the same manner by a foreign use or knowledge of his invention, under the then existing statutes.[2]

§ 297. It was the object of the clause now under consideration to make this defence of a prior abandonment or dedication to the public available under the general issue, upon notice of the facts intended to be proved. By "public use" is meant use in public; that is to say, if the inventor himself makes and sells the thing to be used by others, or it is made by one other person only, with his knowledge and without objection, before his application for a patent, *a fortiori*, if he suffers it to get into general use, it will have been in "public use."[3] But where the patentee alone makes the thing for the purposes of experiment and completion, without selling it to be used by others, the term "public use" is not applicable.[4]

§ 298. An important question next arises, as to what will constitute proof of the "consent and allowance" of the

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[1] Pennock *v.* Dialogue, 2 Peters, 1.
[2] Shaw *v.* Cooper, 7 Peters, 292.
[3] Pennock *v.* Dialogue; Shaw *v.* Cooper; Mellus *v.* Silsbee, 4 Mas. 108.
[4] Shaw *v.* Cooper.

patentee to the "public use or sale" of his invention before his application. In the first place, a knowledge of such public use or sale by others, without objection on his part, will go far towards raising the presumption of an acquiescence, and in some cases will be a sufficient proof of it. The question in such cases is as to his consent; and if knowledge of the use of his invention by others is brought home to him, and no exclusive right has been asserted by him against that use, his silence will furnish very strong evidence that he has waived his right.[1] If the evidence shows a long acquiescence, or a very general use, it will be conclusive.[2]

§ 299. In the second place, although acquiescence cannot be presumed without knowledge, such knowledge may be presumed from the circumstances, and is not always required to be proved by direct evidence.[3]

§ 300. In the third place, no particular lapse of time is necessary to be shown, after knowledge and acquiesence are established, in order to prove an abandonment or dedication to the public. In one of the cases the invention was made in the year 1804, and suffered to go into general use without any claim of an exclusive right, or any objection, and without receiving any compensation, until the year 1822.[4] In another case the invention was completed in 1811, and the letters-patent were obtained in 1818; in the interval, a single individual had made and publicly sold large quantities of the thing patented, under an agreement with the inventor as to price.[5] In a third case, the inventor, who was a foreigner, came to this country in 1817, and might lawfully have applied for a patent in 1819, but did

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[1] Mellus *v.* Silsbee, 4 Mas.

[2] *Ibid;* Shaw *v.* Cooper.

[3] Shaw *v.* Cooper, 7 Peters, 292, 321.

[4] Mellus *v.* Silsbee, 4 Mas.

[5] Pennock *v.* Dialogue.

not do so until three years afterwards. It appeared that he invented the instrument in 1813 or 1814, and made it known to certain persons in England, by or through whom, contrary to his intention, it was publicly used and sold there.[1] In a fourth case, in England, the patentee had sold the article in the public market four months before the date of the patent.[2] In all these cases the patentee was held to have abandoned or dedicated to the public his right in the invention.

§ 301. But on the other hand it is a still further question, what constitutes a public use, with the consent or allowance of the patentee? What acts, in other terms, within a longer or shorter period of time, or what permission to use, granted or allowed to several persons, or restricted to a single instance, or what use by the patentee himself, will amount to an abandonment or dedication to the public? Is the intention with which the acts are done, or the use permitted, an element in the question, or is the intention wholly immaterial, provided certain acts are done, or a certain use is permitted? In determining these questions, it is necessary to discriminate between the cases of a use permitted to others, or of a knowledge imparted to others, and the exercise or practice of the invention by the patentee himself.

§ 302. In the case of Shaw *v.* Cooper, already referred to, the Supreme Court of the United States said that the intention of the inventor is not the true ground in these cases; that "whatever may be his intention, if he suffers the invention to get into public use, through any means whatsoever, without an immediate assertion of his right, he is not entitled to a patent; nor will a patent obtained under such circumstances, protect his right."[3] The meaning of this obviously is, that no

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[1] Shaw *v* Cooper, 7 Peters, 292.
[2] Wood *v.* Zimmer, 1 Holt, N. P. C. 60.
[3] 7 Peters, 292, 323.

matter what the intention of the patentee was, in imparting to another a knowledge of his invention, if the person or persons to whom he had so imparted it, afterwards, though fraudulently, use the invention in public, and the patentee looks on without objection or assertion of his right, the public will have become possessed of the invention, and the patentee cannot resume his right in it by obtaining a patent. This meaning is apparent from other parts of the opinion in the same case; for the court say, that if the invention has become known to the public through fraudulent means, the patentee should assert his right immediately, and take the necessary steps to legalize it.[1] So,

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[1] "Vigilance is necessary to entitle an individual to the privileges secured under the patent law. It is not enough that he should show his right by invention, but he must secure it in the mode required by law. And if the invention, through fraudulent means, shall be made known to the public, he should assert his right immediately, and take the necessary steps to legalize it.

The patent law was designed for the public benefit, as well as for the benefit of inventors. For a valuable invention, the public, on the inventor's complying with certain conditions, give him for a limited time the profits arising from the sale of the thing invented. This holds out an inducement for the exercise of genius and skill in making discoveries which may be useful to society and profitable to the discoverer. But it was not the intention of this law, to take from the public that of which they were fairly in possession.

In the progress of society the range of discoveries in the mechanic arts, in science, and in all things which promote the public convenience, as a matter of course, will be enlarged. This results from the aggregation of mind, and the diversities of talents and pursuits, which exist in every intelligent community. And it would be extremely impolitic to retard or embarrass this advance, by withdrawing from the public any useful invention or art, and making it a subject of private monopoly. Against this consequence, the legislature have carefully guarded in the laws they have passed on the subject. It is undoubtedly just that every discoverer should realize the benefits resulting from his discovery, for the period contemplated by law. But these can only be secured by a substantial compliance with every legal requisite. His exclusive right does not rest alone upon his discovery, but also upon the legal sanctions which have been given to it, and the forms of law with which it has been clothed.

too, it is apparent from the opinion of the same court in Pennock *v.* Dialogue, that it is the voluntary acquiescence of the

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No matter by what means an invention may be communicated to the public, before the patent is obtained; any acquiescence in the public use, by the inventor, will be an abandonment of his right. If the right were asserted by him who fraudulently obtained it, perhaps no lapse of time could give it validity. But the public stand in an entirely different relation to the inventor. The invention passes into the possession of innocent persons, who have no knowledge of the fraud, and at a considerable expense perhaps, they appropriate it to their own use. The inventor or his agent has full knowledge of these facts, but fails to assert his right; shall he afterwards be permitted to assert it with effect? Is not this such evidence of acquiescence in the public use, on his part, as justly forfeits his right?

If an individual witness a sale and transfer of real estate, under certain circumstances, in which he has an equitable lien or interest, and does not make known this interest, he shall not afterwards be permitted to assert it. On this principle it is, that a discoverer abandons his right, if, before the obtainment of his patent, his discovery goes into public use. His right would be secured by giving public notice that he was the inventor of the thing used, and that he should apply for a patent. Does this impose any thing more than reasonable diligence on the inventor? And would any thing short of this be just to the public? The acquiescence of an inventor in the public use of an invention, can in no case be presumed, when he has no knowledge of such use. But this knowledge may be presumed from the circumstances of the case. This will, in general, be a fact for the jury. And if the inventor do not, immediately after this notice, assert his right, it is such evidence of acquiescence in the public use, as forever afterwards to prevent him from asserting it. After his right shall be perfected by a patent, no presumption arises against it from a subsequent use by the public.

When an inventor applies to the department of state for a patent, he should state the facts truly; and indeed he is required to do so, under the solemn obligations of an oath. If his invention has been carried into public use by fraud; but for a series of months or years, he has taken no steps to assert his right; would not this afford such evidence of acquiescence as to defeat his application, as effectually as if he failed to state that he was the original inventor. And the same evidence which should defeat his application for a patent, would, at any subsequent period, be fatal to his right. The evidence he exhibits to the department of state is not only ex parte, but interested; and the questions of fact are left open, to be controverted by any one who shall think proper to contest the right under the patent.

A strict construction of the act, as it regards the public use of an inven-

inventor in the *public use*, and not his voluntarily imparting the knowledge to the person who fraudulently or otherwise uses it in public, that fastens upon him the presumption of a dedication.[1] It is also clear, that when the act or acts of user were by way of experiment, in order to perfect the invention, the inventor does not lose his right.

§ 303. Hence it appears, that the intention with which the inventor did the acts which are relied on as proof of "public use" is material, unless the evidence goes to the extent of showing, that the invention had got beyond the control of the inventor, and he had not taken any steps to prevent its being thus situated. In other words, it may be a material element, in determining whether the presumption of acquiescence in public use arises, to ascertain whether the inventor used the invention himself, or imparted a knowledge of it to others, with or without an intention to limit such use or knowledge, in respect to time, extent, or object.

§ 304. Where a party practises his invention himself, for the purposes of experiment or completion before he takes out a patent, the inference that he intends to surrender his invention to the public does not arise; and consequently a dedication cannot be proved by evidence that shows only experimental practice by the inventor, whether in public or in private.[2] Indeed,

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tion, before it is patented, is not only required by its letter and spirit, but also by sound policy. A term of fourteen years was deemed sufficient for the enjoyment of an exclusive right of an invention by the inventor. But if he may delay an application for his patent, at pleasure, although his invention be carried into public use, he may extend the period beyond what the law intended to give him. A pretence of fraud would afford no adequate security to the public in this respect, as artifice might be used to cover the transaction. The doctrine of presumed acquiescence, where the public use is known, or might be known to the inventor, is the only safe rule which can be adopted on this subject." 7 Peters, 319, 320, 321, 322.

[1] 2 Peters, 1, 23.

[2] Wyeth *v.* Stone, 1 Story's R. 271, 280. In this case Mr. Justice

it may be stated, as a general test, in cases of a supposed dedication through the using, exercising, or practising the invention by the patentee himself, previous to his application for a patent, that whenever the evidence stops short of proving such a use, exercise, or practice for the purpose of gain, a "public use" will not be proved.[1]

Story said, "In the next place, as to the supposed public use of Wyeth's machine before his application for a patent. To defeat his right to a patent, under such circumstances, it is essential that there should have been a public use of his machine, substantially as it was patented, with his consent. If it was merely used occasionally by himself in trying experiments, or if he allowed only a temporary use thereof by a few persons, as an act of personal accommodation or neighborly kindness, for a short and limited period, that would not take away his right to a patent. To produce such an effect, the public use must be either generally allowed or acquiesced in, or at least be unlimited in time, or extent, or object. On the other hand, if the user were without Wyeth's consent, and adverse to his patent, it was a clear violation of his rights, and could not deprive him of his patent."

See also Ryan *v.* Goodwin, 3 Sumner, 518; Bentley *v.* Fleming, 1 Car. & Kirw. 587. This last case shows a strong tendency to limit the effect of use in public, by the intention of the patentee. The patent in question had been obtained for making a card machine; and there was evidence, that about five or six weeks before the letters-patent were obtained, the inventor, one Thornton, had lent the machine to one N., in order that he might try whether it would set the teeth of the cards. There was also evidence that N's room was in a mill, and that men were constantly going backwards and forwards, to and from the said room. It appeared, moreover, that for some weeks before the time at which the machine was lent to N., it had been in complete working condition. On this evidence it was submitted, on the part of the defendant, that the plaintiff was out of court—first, on the ground that the machine had been publicly used in N's room, which was a public room, before the granting of the letters-patent; and on this point the case of Wood *v.* Zimmer was referred to. Cresswell, J. said, "Have you any case that goes that length? The case referred to was the case of an absolute sale; but here there is no evidence that the machine was given to N. *for the purpose of giving it publicity*. The evidence merely is, that Thornton lent the machine to N. in order that he might discover whether it really was worth while to take out a patent for it or not. I cannot stop the case on that point."

[1] Post, § 305, note.

§ 305. It has been held in England, where the "public use" must be a public use in England, that the making in England of a single pair of wheels, the subject of the patent, under the direction of the patentee, but under an injunction of secresy, to be sent abroad for a person who intended to take a share in the patent, was not a public use within the realm.[1] But as our

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[1] Morgan *v.* Seaward, Webs. Pat. Cas. 189, 193. In this case, Parke, B. said, "The evidence was that before the date of the patent, (which was the 22d of July, 1829,) Curtis, an engineer, made for Morgan two pairs of wheels upon the principle mentioned in the patent at his own factory. Galloway, the patentee, gave the instructions to Curtis under an injunction of secrecy, because he was about to take out a patent. The wheels were completed and put together at Curtis's factory, but not shown or exposed to the view of those who might happen to come there. After remaining a short time, the wheels were taken to pieces, packed up in cases, and shipped in the month of April on board a vessel in the Thames, and sent for the use of the Venice and Trieste Company, of which Morgan was managing director, and which carried on its transactions abroad, but had shareholders in England. Curtis deposed, that "they were sold to the company," without saying by whom, which may mean that they were sold by Curtis to Morgan for the company; and Morgan paid Curtis for them. Morgan and Galloway employed an attorney, who entered a caveat against any patent on the second of March, and afterwards solicited the patent in question, which was granted to Galloway and assigned to Morgan. Upon these facts, the question for us to decide is, whether the jury must have necessarily found for the defendants, or whether they might have found that this invention, at the date of the letters-patent, was new in the legal sense of that word. The words of the statute are, that grants are to be good "of the sole working or making of any manner of new manufactures within this realm, to the first and true inventor or inventors of such manufactures, which others at the time of the making of such letters-patent and grants did not use;" and the proviso in the patent in question, founded on the statute, is, that if the invention be not a new invention as to the public use and exercise thereof in England, the patent should be void. The word "manufacture" in the statute must be construed in one of two ways; it may mean the machine when completed, or the mode of constructing the machine. If it mean the former, undoubtedly there has been no use of the machine, as a machine, in England, either by the patentee himself or any other person; nor indeed any use of the machine in a foreign country before the date of the patent. If the term "manufacture" be construed to be "the mode of constructing the machine," there

law stood before the year 1839, if the inventor sold to any one who might choose to buy, although it was only a single speci-

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has been no use or exercise of it in England, in any sense which can be called "public." The wheels were constructed under the direction of the inventor, by an engineer and his servants, with an injunction of secresy, on the express ground that the inventor was about to take out a patent, and that injunction was observed; and this makes the case, so far, the same as if they had been constructed by the inventor's own hands, in his own private workshop, and no third person had seen them whilst in progress. The operation was disclosed, indeed, to the plaintiff, Morgan, but there is sufficient evidence that Morgan, at that time, was connected with the inventor, and designing to take a share of the patent. A disclosure of the nature of the invention to such a person, under such circumstances, must surely be deemed private and confidential. The only remaining circumstance is, that Morgan paid for the machines, with the privity of Galloway, on behalf of the Venice and Trieste Steam Company, of which he was the managing director; but there was no proof that he had paid more than the price of the machines, as for ordinary work of that description; and the jury would also be well warranted in finding, that he did so with the intention that the machine should be used abroad only, by this company, which, as it carried on its transactions in a foreign country, may be considered as a foreign company; and the question is, whether this solitary transaction, without any gain being proved to be derived thereby to the patentee or to the plaintiff, be a use or exercise in England, of the mode of construction, in any sense which can be deemed a use by others, or a public use, within the meaning of the statute and the patent. We think not. It must be admitted, that if the patentee himself had before his patent constructed machines for sale as an article of commerce, for gain to himself, and been in the practice of selling them publicly, that is, to any one of the public who would buy, the invention would not be new at the date of the patent. This was laid down in the case of Wood *v.* Zimmer (Holt, N. P. C. 58, and Webs. Pat. Cas. 44, n.) and appears to be founded on reason; for if the inventor could sell his invention, keeping the secret to himself, and when it was likely to be discovered by another take out a patent, he might have, practically, a monopoly for a much longer period than fourteen years. Nor are we prepared to say, that if such a sale was of articles that were only fit for a foreign market, or to be used abroad, it would make any difference; nor that a single instance of such a sale as an article of commerce, to any one who chose to buy, might not be deemed the commencement of such a practice, and the public use of the invention, so as to defeat the patent. But we do not think that the patent is vacated on the ground of the want of novelty, and the previous

men of his invention, and sold for profit on it as an invention, such a sale would be a "public use," and the unlimited nature of the object with which a knowledge of the invention was imparted, would prevent him from resuming his exclusive right by a subsequent patent.[1] It will presently be stated, how far the law has been modified in this respect.

§ 306. Another limitation to the doctrine of presumptive dedication, or public use, with the consent, &c., is found in the case of a piratical user of the invention, by a party to whom the inventor has imparted a knowledge of it in confidence, before he has applied for a patent. Many inventions can be perfected and carried into practice only through the aid of workmen, servants, and other *employées*. We have seen that an inventor may entrust another person, confidentially, with a knowledge of his invention, for certain limited purposes; and if such a person afterwards fraudulently makes public the knowledge so acquired, the authorities seem to be agreed, that the inventor may, if he takes immediate steps to give notice of his exclusive right, obtain a valid patent.[2] The words of the statute, describing the

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public use or exercise of it, by a single instance of a transaction such as this between the parties, connected as Galloway and the plaintiff are, which is not like the case of a sale to any individual of the public who might wish to buy; in which it does not appear that the patentee has sold the article, or is to derive any profit from the construction of his machine, nor that Morgan himself is; and in which the pecuniary payment may be referred merely to an ordinary compensation for the labor and skill of the engineer actually employed in constructing the machine; and the transaction might, upon the evidence, be no more in effect, than that Galloway's own servants had made the wheels; that Morgan had paid them for the labor, and afterwards sent the wheels to be used by his own co-partners abroad. To hold this to be what is usually called a publication of the invention in England, would be to defeat a patent by much slighter circumstances than have yet been permitted to have that effect."

[1] *Ibid.*; Wood *v.* Zimmer, 1 Holt, N. P. C. 60.

[2] Pennock *v.* Dialogue, 2 Peters, 1; Shaw *v.* Cooper, 7 Peters, 292; Mellus *v.* Silsbee, Grant *v.* Raymond, 6 Peters, 248, 249; McClurg *v.* Kingsland, 1 Howard, 202, 207.

defence now under consideration, make it clear, that, if the invention has come into public use through a breach of confidence, it cannot be said to be in public use "with the consent or allowance" of the patentee; it is only when he has been silent after it has so become public, that the presumption of consent and allowance arises.[1] The Act of 1839, as will appear hereafter, has made this point still more clear. Another instance of a use, which will not expose the patentee to the consequences of this defence, is that suggested on more than one occasion, by Mr. Justice Story, where the use has been permitted to others, for other limited purposes than those of experiment or completion, as from motives of neighborly kindness and the like.[2] The test that is afforded by the case of Morgan *v.* Seaward, above cited, is applicable here also; namely, that the evidence excludes the supposition that the patentee had put the thing into public use, for the purpose of profit on it, as an invention.[3] If a patentee could show clearly that he had allowed to others a limited use of his invention, not for his own profit, but for their accommodation, in a manner consistent with a clear intention to hold the exclusive privilege, and the invention had not got beyond his control, with his apparent acquiescence, he would not be within the mischief of this part of the statute. Of course, mere delay to take out a patent, unaccompanied by public use or sale of the thing, with the consent or allowance of the patentee, before his application, however long may be the interval between the completion of the thing and the application, will have no effect upon the patent.[4] Mere delay has no other

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[1] Ryan *v.* Goodwin, 3 Sumner, 518; Pierson *v.* The Eagle Screw Company, 3 Story's R. 406, 407, 408.

[2] Mellus *v.* Silsbee, 4 Mas. 111; Wyeth *v.* Stone, 1 Story's R. 280, 281; Ryan *v.* Goodwin, 3 Sumner, 518.

[3] Cited *ante*.

[4] Ryan *v.* Goodwin, 3 Sumner, 519. In the case of Bentley *v.* Fleming, 1 Car. & Kirw. 587, 588, it was contended that, inasmuch as the machine in question was a complete workable machine for a long period before the letters-patent were taken out, it did not form the subject of a patent at all.

importance, than as it tends to show acquiescence in such public use as may have occurred, in the meantime; or to show that the acts of the inventor went beyond a use or permission to use, for the purpose of experiment, or other limited object.

§ 307. It now remains to be stated, how far this defence of a "prior public use or sale with the consent or allowance" of the patentee has been restricted or modified by subsequent legislation. Under this clause of the Act of 1836, a use of the invention by a single person, or a sale of the thing invented to a single person, might, as we have seen, amount to a public use or sale, with the consent or allowance of the patentee. To remedy the inconvenience arising from this operation of the law, the Act of 1839, § 7, provided "that every person or corporation, who has, or shall have purchased or constructed any newly-invented machine, manufacture, or composition of matter, prior to the application, by the inventor or discoverer, for a patent, shall be held to possess the right to use, and vend to others to be used, the specific machine, manufacture, or composition of matter, so made or purchased, without liability therefor to the inventor, or any other person interested in such invention; and no patent shall be held to be invalid, by reason of such purchase, sale, or use, prior to the application for a patent as aforesaid, except on proof of abandonment of such invention to the public; or that such purchase, sale, or prior use, has been for more than two years prior to such application for a patent."

§ 308. This enactment enables a patentee to permit the use of his invention, by individuals, before his application, with more safety than he formerly could. Such use is not to invali-

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Cresswell, J.—"A man cannot enjoy his monopoly by procuring a patent, after having had the benefit of the sale of his invention. But you cannot contend, that if a man were to keep his invention shut up in his room for twenty years, that circumstance merely would deprive him of his right to obtain a patent for it."

date the patent, except on proof of abandonment of the invention to the public, or that it had been continued for more than two years prior to the application for a patent. The question arises upon this provision, then, whether the particular purchase, sale, or prior use, may of itself, under some circumstances, furnish proof of abandonment to the public, or whether such an abandonment must be proved by other cases, and by other evidence *dehors* the particular purchase, sale, or prior use, that happens to be in question. The obvious construction of the act is, that a purchase, sale, or prior use, before the application for a patent, shall not invalidate it, *unless* it amounts to an abandonment to the public; a purchase, sale, or prior use, shall not have this effect, *per se*, but if connected with facts which show an abandonment to the public, or if it has been for more than two years prior to the application, it will have this effect.[1] Thus, in the case of McClurg *v.* Kingsland, where the defendants used the invention for four months before the application of the inventor for a patent, such use being in public, with the consent and allowance of the patentee, he being in their employ, and making a part of the apparatus, by which the invention was to be applied, but receiving no compensation for the use of his invention, and not giving any notice to the defendants not to use his invention, until, on a misunderstanding upon another subject, he left their employment; the Supreme Court of the United States said that it would be no strained construction, under such circumstances, to hold that the patent, subsequently obtained, was void; although the decision merely went to the point that the acts of the patentee justified the presumption of a license to the defendants.[2]

§ 309. The words of the statute which thus authorizes a public use or sale by, or to individuals, prior to the application for a

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[1] See the comment of Mr. Justice Story, on this statute, in Pierson *v.* The Eagle Screw Company, 3 Story's R. 402, 405, 407, cited *ante*.

[2] 1 Howard, 202, 208.

patent, make the subject of such use or sale, "any newly invented machine, manufacture, or composition of matter;" and the purchaser is authorized to use, and vend to others to be used, "the specific machine, manufacture, or composition of matter," without liability to the inventor, &c.; and then the statute declares, that the patent shall still be valid, notwithstanding such prior use or sale, except on proof of the abandonment of "such invention" to the public, &c. It might admit of some doubt, upon this language, whether the invention of a method of manufacture, a process, or an art, or any thing but a machine, a manufacture, or a composition of matter, is within the scope of the provision, and whether the purchaser could do any thing more than use or vend to others to be used the specific thing which he had purchased. But the Supreme Court of the United States have construed the terms "newly invented machine, manufacture, or composition of matter" to mean "the invention patented," whatever it may be; and the words "the specific machine," to refer to the thing as originally invented, of which the right is afterwards secured by a patent; so that according to the precedent afforded by the case in which this construction was adopted, this statute embraces whatever may be the subject-matter of a valid patent, although it may be a process, or method of manufacture, and not a machine, &c.[1]

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[1] McClurg *v.* Kingsland, 1 Howard, 202, 209. The court said: "At the trial below and here, the plaintiff's counsel have contended, that this act cannot apply to the present case, inasmuch as the protection it affords to the person who had the prior use, is confined to the specific machine, &c., and does not extend to such use of the invention, or thing patented, if it does not consist of a machine, &c., as contradistinguished from the new mode or manner in which an old machine or its parts operates, so as to produce the desired effect; but we think that the law does not admit of such construction, whether we look at its words or its manifest objects, when taken in connection with former laws, and the decisions of this court in analogous cases.

"The words 'such invention' must be referred back to the preceding part of the sentence, in order to ascertain the subject-matter to which it relates, which is none other than the newly-invented machine, manufacture, or composition of matter constituting the thing patented, otherwise these words

§ 310. The result, therefore, of the different statute provisions and the authorities, is, that this defence of a prior public

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become senseless when the invention is not strictly of a machine, &c. Now, in the present case, we find the invention consists solely in the angular direction given to the tube through which the metal is conducted into the cylinder in which the roller is cast. Every part of the machinery is old, the roller itself is no part of the invention, and cannot be the machine, manufacture, or composition of matter contemplated by Congress, nor can the word 'specific' have any practical effect, unless it is applied to the thing patented, whatever it may be, without making a distinction between a machine, &c., and the mode of producing a useful result, by the mere direction given to one of the parts of an old machine. Such a construction is not justified by the language of the law, and would defeat both of its objects. If it does not embrace the case before us, the consequence would be that the use of the invention, under the circumstances in evidence, would, according to the decision in 2 Peters, 14, 15, invalidate the patent; for if the act operates to save the avoidance of the patent, it must, of consequence, protect the person who uses the invention before the application for a patent. Both objects must be effected, or both must fail, as both parts of the act refer to the same thing, and the same state of things, as affecting the person using the newly-invented machine, or the thing patented, as well as the inventor. Had the words 'invention,' or 'thing patented,' been used instead of machine, &c., there could have been no room for doubt of the application of the act to the present case; and, by referring to the phraseology of the different acts of Congress, denoting the invention, it is apparent that, though there is a difference in the words used, there is none as to their meaning or reference to the same thing. Thus, we find in the fourteenth section of the Act of 1836, relating to suits for using 'the thing whereof the exclusive right is secured by any patent;' in the fifteenth, 'his invention, his discovery, the thing patented.' 'that which was in fact invented or discovered,' 'the invention or discovery for which the patent issued,' 'that of which he was the first inventor.' In the first section of the Act of 1839, 'any patent for any invention, discovery, or improvement,' 'inventions and discoveries;' in the second section, 'the invention;' in the third, 'invention or discovery;' in the fourth, 'patented inventions and improvements;' in the fifth, 'the thing as originally invented.' 2 Story, 2510, 2511, 2546.

"We therefore feel bound to take the words 'newly-invented machine, manufacture, or composition of matter,' and 'such invention,' in the Act of 1839, to mean 'the invention patented,' and the words 'specific machine,' to refer to 'the thing as originally invented,' whereof the right is secured by patent; but not to any newly-invented improvement on a thing once patented.

use or sale, with the consent or allowance of the patentee, can now be made good so as to invalidate a patent, only by showing an abandonment to the public, or that the use or sale dates from a period more than two years before the application for a patent; that such an abandonment will not be proved by the particular act of use or sale alone, but that the act of use or sale may be attended with such circumstances as to amount to an abandonment; and that the abandonment may also be proved by other acts or omissions disconnected with the particular use or sale, which the patentee may have allowed to individuals, and which he can show did not alone amount to an abandonment.[1]

§ 311. The next special defence stated in the act of 1836, is, "that the patentee had surreptitiously or unjustly obtained the patent for that which was in fact invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same." This provision was intended to embrace the case of a patent being obtained fraudulently, when the party obtaining it was not the inventor, and also the case of two independent inventors, where the one makes his application before the other, who was the first inventor, and so obtains a patent for that which was previously invented by another.

§ 312. With regard to the first case, of a patent obtained by a person not the inventor, by a fraud on the rights of the real inventor, it is sufficient to observe that such a defence, if made

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The use of the invention before an application for a patent must be the specific improvement then invented and used by the person who had purchased, constructed, or used the machine to which the invention is applied; so construed, the objects of the Act of 1839 are accomplished; a different construction would make it necessary to carry into all former laws the same literal exposition of the various terms used to express the same thing, and thereby changing the law according to every change of mere phraseology, make it a labyrinth of inextricable confusion."

[1] As to an abandonment or dedication after the patent has been obtained, see the case Wyeth *v.* Stone, 1 Story's R. 73.

out, would be a complete bar to the action, upon general principles, as well as upon other provisions of the statute. One of the modes in which a patent may be thus surreptitiously obtained, is by obtaining a knowledge of the invention from the public records where the inventor has deposited a description of it. When the real inventor has filed such a description at the patent office, or has obtained a patent, he has given notice to every subsequent applicant for a patent for the same thing, of the fact that he invented it; and although others may not afterwards be able to offer direct evidence that a subsequent patentee had seen and pirated the machine or other thing invented by the former applicant or patentee, yet the jury may infer a piracy from the existence of the former record, of which every subsequent patentee is presumed to have knowledge.[1] As to the case of two independent inventors, one of whom makes an earlier application than another for a patent and succeeds in obtaining it, it will be a good defence to an action upon such a patent, if it can be shown that the same thing was first invented by another, although not actually perfected, provided the first inventor was at the time using reasonable diligence in adapting and perfecting the thing invented.[2]

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[1] Odiorne *v.* Winkley, 2 Gallis. 51, 55. In this case, Mr. Justice Story said, "As to the question, whether the patent was surreptitiously obtained, there is no direct or positive proof, that Reed had ever seen Perkins's machine before he obtained a patent, but there is evidence, from which the jury may legally infer the fact, if they believe that evidence. It is a presumption of law, that when a patent has been obtained, and the specifications and drawings recorded in the patent office, every man who subsequently takes out a patent for a similar machine, has a knowledge of the preceding patent. As in chancery it is a maxim, that every man is presumed to have notice of any fact, upon which he is put upon inquiry by documents within his possession, if such fact could, by ordinary diligence, be discovered upon such inquiry. It is also a presumption of fact, that every man, having within his power the exact means of information, and desirous of securing to himself the benefit of a patent, will ascertain for his own interest, whether any one on the public records has acquired a prior right."

[2] Reed *v.* Cutter, 1 Story's R. 590, 599. In this case Mr. Justice Story

§ 313. The last defence mentioned in the statute, is, that the

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said, "The passage cited from Mr. Phillips's work on Patents, (p. 395,) in the sense in which I understand it, is perfectly accurate. He there expressly states, that the party claiming a patent must be the original and first inventor; and that his right to a patent will not be defeated by proof, that another person had anticipated him in making the invention, unless such person "was using reasonable diligence in adapting and perfecting the same." These latter words are copied from the fifteenth section of the Act of 1836, chapter 357, and constitute a qualification of the preceding language of that section; so that an inventor, who has first actually perfected his invention, will not be deemed to have surreptitiously or unjustly obtained a patent for that, which was in fact first invented by another, unless the latter was at the time using reasonable diligence in adapting and perfecting the same. And this I take to be clearly law; for he is the first inventor in the sense of the Act, and entitled to a patent for his invention, who has first perfected and adapted the same to use; and until the invention is so perfected and adapted to use, it is not patentable. An imperfect and incomplete invention, resting in mere theory, or in intellectual notion, or in uncertain experiments, and not actually reduced to practice, and embodied in some distinct machinery, apparatus, manufacture, or composition of matter, is not, and indeed cannot be, patentable under our patent acts; since it is utterly impossible, under such circumstances, to comply with the fundamental requisites of those acts. In a race of diligence between two independent inventors, he who first reduces his invention to a fixed, positive, and practical form, would seem to be entitled to a priority of right to a patent therefor. (Woodcock *v.* Parker, 1 Gallis. R. 438.) The clause of the fifteenth section, now under consideration, seems to qualify that right, by providing that, in such cases, he who invents first shall have the prior right, if he is using reasonable diligence in adapting and perfecting the same, although the second inventor has, in fact, first perfected the same, and reduced the same to practice in a positive form. It thus gives full effect to the well-known maxim, that he has the better right, who is prior in point of time, namely, in making the discovery or invention. But if, as the argument of the learned counsel insists, the text of Mr. Phillips means to affirm, (what, I think, it does not,) that he, who is the original and first inventor of an invention, so perfected and reduced to practice, will be deprived of his right to a patent, in favor of a second and subsequent inventor, simply because the first invention was not then known, or used by other persons than the inventor, or not known or used to such an extent, as to give the public full knowledge of its existence, I cannot agree to the doctrine; for, in my judgment, our Patent Acts justify no such construction."

patentee, being an alien at the time the patent was granted, "had failed and neglected for the space of eighteen months from the date of the patent, to put and continue on sale to the public, on reasonable terms, the invention or discovery, for which the patent issued." The object of this provision was, to prevent foreign inventors from obtaining patents in this country, and afterwards withholding the use of their inventions from the public for an unreasonable length of time.

CHAPTER III.

OF THE REMEDY IN EQUITY TO RESTRAIN INFRINGEMENTS.

§ 314. We have seen that the common law and the statute both afford a remedy, by an action for damages, for the infringement of patent rights. But this remedy would be wholly inadequate to the protection of such rights, if it were not accompanied and fortified by another remedy, which flows from that great principle of equity jurisprudence, that where there is a legal right, and the nature of the injury to which it is exposed is such that a preventive remedy is indispensable, equity will afford that remedy, by an injunction. The grounds of the equity jurisdiction in cases of patents are, the prevention of irreparable mischiefs, the suppression of a multiplicity of suits and vexatious litigation, and the more complete discovery, from the party guilty of infringement, of the extent of the injury done to the patentee, than can be obtained in an action at law.[1] It does not belong to the purposes of this work, to trace the origin of this branch of equity jurisdiction, nor is it necessary to do so, since the patent laws have expressly adopted in the broadest terms the remedy which it affords, for the protection of patent rights, and have directed the proper courts "to grant injunctions according to the course and principles of courts of equity, to prevent the violation of the rights of any inventor as secured to him by any law of the United States, on such terms and conditions as the said courts may deem reasonable."[2] All that is requisite, therefore, in the present work, is to develop

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[1] 2 Story's Eq. Jurisp. § 930, 931, 932, 933.

[2] Act of July 4, 1836, c. 357, § 17.

the application of the doctrines and practice of courts of equity to the rights of inventors, in the remedy by injunction.

§ 315. As a preliminary remark, however, we may notice, that the discretion vested in the court by the terms of the statute above cited, to grant injunctions on such terms and conditions as the court may deem reasonable, is in perfect accordance with the principles of equity.[1] This discretion is not a wholly

[1] In Bacon *v.* Jones, 4 Mylne & Cr. 433, 436, Lord Cottenham made the following remarks on the granting of injunctions in cases of patents. "When a party applies for the aid of the court, the application for an injunction is made either during the progress of the suit, or at the hearing; and in both cases, I apprehend, great latitude and discretion are allowed to the court in dealing with the application. When the application is for an interlocutory injunction, several courses are open; the court may at once grant the injunction, simpliciter, without more — a course which, though perfectly competent to the court, is not very likely to be taken where the defendant raises a question as to the validity of the plaintiff's title; or it may follow the more usual, and, as I apprehend, more wholesome practice in such a case, of either granting an injunction, and at the same time directing the plaintiff to proceed to establish his title at law, and suspending the grant of the injunction until the result of the legal investigation has been ascertained, the defendant in the mean time keeping an account. Which of these several courses ought to be taken, must depend entirely upon the discretion of the court, according to the case made.

When the cause comes to a hearing, the court has also a large latitude left to it; and I am far from saying that a case may not arise in which, even at that stage, the court will be of opinion that the injunction may properly be granted without having recourse to a trial at law. The conduct and dealings of the parties, the frame of the pleadings, the nature of the patent right, and of the evidence by which it is established — these and other circumstances may combine to produce such a result; although this is certainly not very likely to happen, and I am not aware of any case in which it has happened. Nevertheless, it is a course unquestionably competent to the court, provided a case be presented which satisfies the mind of the judge, that such a course, if adopted, will do justice between the parties.

Again, the court may, at the hearing, do that which is the more ordinary course; it may retain the bill, giving the plaintiff the opportunity of first establishing his right at law. There still remains a third course, the propriety of which must also depend upon the circumstances of the case, that of at once dismissing the bill."

unregulated discretion, but the clause in which it is expressed is to be considered as affected by the previous direction that the injunction is to be granted according to the course and principles of courts of equity, which are guided by certain well-settled rules; so that the terms and conditions to be imposed in each case will be ascertained, by applying to the circumstances of the case those principles and that course of practice which have been usually followed, and which will admit of a "reasonable" application to the particular facts of the case.

§ 316. I. *The Parties.* The parties entitled to relief in equity against the infringement of a patent are, first, the party or parties interested in the patent. As the remedy in equity is given in order to protect a legal right, and as the statute gives a right of action to the person or persons interested, whether as patentee, assignees, or grantees of the exclusive right for a particular district, it follows that any person holding the legal title, or the right to bring an action, may bring a bill for an injunction.

§ 317. We have seen when the assignee of a patent may sue at law in his own name, and when he should join his assignor. The same rules will govern in equity, in determining who are necessary parties to the bill. If the assignee has the whole interest, he may sue alone; but if he has less than the whole interest, he must join the patentee. If the assignment has not been recorded, the assignee is not substituted to the right and responsibility of the patentee, so as to maintain any suit at law or in equity, founded upon the patent;[1] and where there is a

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[1] Wyeth *v.* Stone, 1 Story's R. 273, 295. Story, J. "The objection which I deem fatal, is that the bill states and admits, that the assignment to the plaintiff, Tudor, (made in February, 1832,) has never yet been recorded in the state department, according to the provisions of the Patent Act of 1793, ch. 55, § 4. That act provides, "That it shall be lawful for any inventor, his executor or administrator, to assign the title and interest in the

joint suit by the patentee and the assignee, and a disclaimer has been filed by the patentee, in which the assignee did not join, the disclaimer cannot operate in favor of the complainants in such a bill, or in an action at law.[1]

§ 318. There is, however, one distinction between an action at law and a suit in equity, in respect to the parties, and that is the case of an assignment of the exclusive right for a particular district. The grantee of such a right may bring an action at law, within his own district, for an infringement, even against the patentee himself, and consequently he may bring such an action always in his own name.[2]

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said invention at any time; and the assignee, having recorded the said assignment in the office of the Secretary of State, shall thereafter stand in the place of the original inventor, both as to right and responsibility." It seems a necessary, or, at least, a just inference, from this language, that until the assignee has so recorded the assignment, he is not substituted to the right and responsibility of the patentee, so as to maintain any suit at law or in equity, founded thereon. It is true, that no objection is taken in the pleadings on account of this defect; but it is spread on the face of the bill, and therefore the court is bound to take notice of it. It is not the case of a title defectively set forth, but of a title defective in itself, and brought before the court with a fatal infirmity, acknowledged to be attached to it. As between the plaintiffs and the defendants, standing upon adverse titles and rights (whatever might be the case between privies in title and right.) Tudor has shown no joint interest sufficient to maintain the present bill; and therefore it must be dismissed with costs."

[1] *Ibid.* 294.

[2] "The sixth question certified is as follows: whether the plaintiff, if he be an assignee of an exclusive right to use two of the patented machines within the town of Watervliet, has such an exclusive right as will enable him to maintain an action for an infringement of the patent within the said town; or whether, to maintain such action, the plaintiff must be possessed, as to that territory, of all the rights of the original patentee. The plaintiff is the grantee of the exclusive right to construct and use, and to vend to others to be used, two of the patented machines within the town of Watervliet, in the county of Albany. The fourteenth section of the patent law authorizes any person, who is a grantee of the exclusive right in a patent within and throughout a specified portion of the United States, to maintain

§ 319. But in equity the patentee may be joined with the assignee of such an exclusive right, if it be a right to use a limited number of the patented machines in a particular district, because the interest of the patentee is not all vested in the grantee, who, although he may prevent the patentee from licensing other persons within the district, cannot obtain for himself the right to use more machines than the original grant authorized, without paying the patentee for such further license. This interest renders the patentee a proper party in such a bill.[1] Different persons, who have infringed a patent independently of each other, cannot be made defendants in the same bill.[2]

§ 320. II. *The Bill.* — A bill for an injunction to restrain the infringement of a patent, after the address to the court and the statement of the parties, should recite the application for the letters-patent, by the inventor, and the compliance by him with all the pre-requisites for obtaining them, and the issue of the letters, giving the title as it is contained in them, *verbatim*, their attestation by the proper officers, and their delivery to the patentee. Profert of the letters should be made, but it is not necessary to set forth the description of the invention given in the specification.[3] It is necessary, however, to state that the plaintiff, after the issuing of the patent, put his invention into use, and is, at the time of filing the bill, in the exclusive pos-

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an action in his own name for an infringement of the right. The plaintiff comes within the very terms of the section. Although limited to the use of two machines within the town, the right to use them is exclusive. No other party, not even the patentee, can use a right under the patent within the territory without infringing the grant." Wilson *v.* Rousseau, 4 Howard, 646, 686.

[1] Woodworth *v.* Wilson, 4 Howard, 712. It had been previously held that the grantee for a particular district can maintain a bill for an injunction and account. Ogle *v.* Ege, 4 Wash. 584.

[2] Dilly *v.* Doig, 2 Ves. Jr. 487.

[3] Kay *v.* Marshall, 1 M. & Cr. 373; Westhead *v.* Keane, 1 Beav. 287.

session of it.[1] If the bill is brought upon the title of an assignee, either of the whole or a part of the interest, or of an administrator, or if the patent has been renewed, or extended, or amended by a disclaimer, the facts should be properly set forth, to show the present state of the title and the right for which protection is asked. The bill should further state the infringement complained of, whether it has been actually committed or is threatened, and if the right has been previously established by an action at law, against the same or any other party, or an injunction has been previously obtained against the same or any other party, the fact should be set forth.[2] These averments are usually followed by a statement that the defendant has been requested to desist from the use of the invention, and to account for the damages which the plaintiff has sustained. Then follows the charge of actual combination by the defendant with others, if the facts require it, and of a conspiracy, if one is intended to be proved, to destroy the plaintiff's exclusive privilege. The prayer of the bill is for a discovery upon oath and particular answers to the interrogatories, which should be pointed at all the previous material averments in the bill, for a general answer to the bill, for a decree that the defendant account for and pay over the gains and profits which have accrued to him from using the invention, for an injunction to restrain the defendant from the further use of the invention, and to compel the delivery or destruction of the machines or other things which he has made, and for further relief. The prayer should close with asking for a writ of injunction, and a subpœna. The bill should be sworn to, by the usual affidavit.

§ 321. It may often be a serious question, whether an original bill filed for an injunction and other relief is affected by a subsequent surrender and renewal of the patent, pending the

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[1] Isaacs *v.* Cooper, 4 Wash. 359.

[2] See the observations of Mr. Justice Story, cited from Woodworth *v.* Stone, post. See also Orr *v.* Littlefield, 1 Woodbury & M. 13.

proceedings. In a case where this had happened, and a temporary injunction had been granted on the original bill, in which the patentee and certain assignees were plaintiffs, and upon the new patent a supplemental bill was filed against the defendant for the continuance of the injunction and other relief, the injunction was ordered to stand continued, as to the new patent, stated in the supplemental bill, until the hearing or farther order. Hence it appears, that when a patent is surrendered and renewed, pending a temporary injunction, a supplemental bill is necessary, in order to continue the injunction as to the new patent.[1]

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[1] Woodworth *v.* Stone, 3 Story's R. 749, 750. Story, J. — "If the present case had stood merely upon the original bill, it appears to me clear, that the motion to dissolve the injunction granted upon that bill, ought to prevail, because, by the surrender of the patent, upon which that bill is founded, the right to maintain the same would be entirely gone. I agree that it is not in the power of the patentee by a surrender of his patent, to affect the rights of third persons, to whom he has previously, by assignment, passed his interest in the whole or a part of the patent, without the consent of such assignees. But, here, the supplemental bill admits, that the assignees, who are parties to the original and supplemental bill, have consented to such surrender. They have, therefore, adopted it, and it became theirs in the same manner as if it had been their personal act, and done by their authority.

The question, then, is precisely the same, as if the suit were now solely in behalf of the patentee. In order to understand with clearness and accuracy some of the objections to the continuance of the injunction, it may be necessary to state, that the original patent to William Woodworth, (the inventor,) who is since deceased, was granted on the 27th of December, 1828. Subsequently, under the 18th section of the Act of 1836, ch. 357, the Commissioner of Patents, on the 16th of November, 1842, recorded the patent in favor of William W. Woodworth, the administrator of William Woodworth (the inventor) for seven years from the 27th of December, 1849, (to which time the renewed patent extended); and the Commissioner of Patents was directed to make a certificate of such extension in the name of the administrator of William Woodworth, (the inventor,) and to append an authenticated copy thereof to the original letters-patent, whenever the same shall be requested by the said administrator or his assigns. The Commissioner of Patents, accordingly, on the 3d of March, 1845, at the request of the administrator, made such certificate on the original patent. On the 8th of July, 1845, the administrator surrendered the renewed patent granted to

§ 322. III. *The Injunction.* — We have now to state, in the first place, the general principles on which Courts of Equity pro-

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him "on account of a defect in the specification." The surrender was accepted, and a new patent was granted on the same day to the administrator, reciting the preceding facts, and that the surrender was "on account of a defective specification," and declaring that the new patent was extended for fourteen years from the 27th of December, 1828, "in trust for the heirs at law of the said William Woodworth, (the inventor,) their heirs, administrators or assigns."

Now, one of the objections taken to the patent is, that it is for the term of fourteen years, and not for the term of seven years, or for two successive terms of seven years. But it appears to me that this objection is not well founded, and stands *inter Apices juris;* for the new patent should be granted for the whole term of fourteen years from the 27th of December, and the legal effect is the same as it would be, if the patent was specifically renewed for two successive terms of seven years. The new patent is granted for the unexpired term only, from the date of the grant, viz., for the unexpired period existing on the 8th of July, 1845, by reference to the original grant in December, 1828. It is also suggested, that the patent ought not to have been in trust for the heirs at law of the said William Woodworth, their heirs, administrators, or assigns. But this is, at most, a mere verbal error, if indeed it has any validity whatsoever; for the new patent will, by operation of law, enure to the sole benefit of the parties, in whose favor the law designed it should operate, and not otherwise. It seems to me that the case is directly within the purview of the 10th and 13th sections of the Act of 1836, ch. 357, taking into consideration their true intent and objects.

Another objection urged against the continuation of the injunction is, that the breach of the patent assigned in the original bill can have no application to the new patent, and there is no ground to suggest, that, since the injunction was granted, there has been any new breach of the old patent, or any breach of the new patent. But it is by no means necessary, that any such new breach should exist. The case is not like that of an action at law for the breach of a patent, to support which it is indispensable to establish a breach before the suit was brought. But in a suit in equity, the doctrine is far otherwise. A bill will lie for an injunction, if the patent right is admitted or has been established, upon well-grounded proof of an apprehended intention of the defendant to violate the patent right. A bill, *quia timet*, is an ordinary remedial process in equity. Now, the injunction already granted (supposing both patents to be for the same invention) is *primâ facie* evidence of an intended violation, if not of an actual violation. And the affidavit of James N. Buffum is very strong and direct evidence to this same effect.

But the most material objection taken is, that the new patent is not for the

ceed in granting, continuing, or dissolving injunctions, in cases of patents. To obtain an injunction, the plaintiff must accom-

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same invention, as that which has been surrendered. And, certainly, if this be correct, there is a fatal objection to the prolongation of the injunction. But is the objection well founded in point of fact? It is said, that the present patent is for a combination only, and that the old patent was for a combination and something more, or different. But I apprehend that, upon the face of the present patent, the question is scarcely open for the consideration of the court; and, at all events, certainly not open in this stage of the cause. I have already, in another cause, had occasion to decide, that where the Commissioner of Patents accepts a surrender of an old patent and grants a new one, under the Act of 1836, ch. 357, his decision, being an act expressly confided to him by law, and dependent upon his judgment, is not re-examinable elsewhere; and that the court must take it to be a lawful exercise of his authority, unless it is apparent upon the very face of the patent, that he has exceeded his authority, and there is a clear repugnancy between the old and the new patent, or the new one has been obtained by collusion between the Commissioner and the patentee. Now, upon the face of it, the new patent, in the present case, purports to be for the same invention and none other, that is contained in the old patent. The avowed difference between the new and the old, is, that the specification in the old is defective, and that the defect is intended to be remedied in the new patent. It is upon this very ground, that the old patent was surrendered, and the new patent was granted. The claim in the new patent is not of any new invention; but of the old invention more perfectly described and ascertained. It is manifest that, in the first instance, the Commissioner was the proper judge whether the invention was the same or not, and whether there was any deficit in the specification or not, by inadvertence, accident, or mistake; and consequently he must have decided that the combination of machinery claimed in the old patent was, in substance, the same combination and invention claimed and described in the new. My impression is, that at the former trial of the old patent before me, I held the claim substantially, (although obscurely worded,) to be a claim for the invention of a particular combination of machinery for planing, tonguing, and grooving, and dressing boards, &c.; or in other words, that it was the claim of an invention of a planing machine or planing apparatus such as he had described in his specification.

It appears to me, therefore, that *primâ facie*, and, at all events, in this stage of the cause, it must be taken to be true that the new patent is for the same invention as the old patent; and that the only difference is, not in the invention itself, but in the specification of it. In the old, it was defectively described and claimed. In the new, the defects are intended to be remedied.

pany his application with an affidavit that he then believes himself to be the original and first inventor of the thing patented, for, it is said, although when he obtained his patent he might have very honestly sworn as to his belief of such being the fact, yet circumstances may have subsequently intervened, or information may have been communicated, sufficient to convince him that it was not his own original invention, and that he was under a mistake when he applied for his patent.[1] Such a special affidavit was required by Mr. Justice Washington to be subjoined to a bill.[2] And it is the usual practice, on moving for an injunction before the answer has been filed, to read such an affidavit, as well as others to the same purport.[3]

§ 323. In the courts of the United States, notice that an injunction is to be applied for, must be served on the defendant, as no injunction, whether temporary or final, can be granted without reasonable previous notice to the adverse party or his attorneys, of the time and place of moving for the same.[4]

Whether they are effectually remedied is a point not now properly before the court. But as the Commissioner of Patents has granted the new patent as for the same invention as the old, it does not appear to me, that this court is now at liberty to revise his judgment, or to say, that he has been guilty of an excess of authority, at least, (as has been already suggested,) not in this stage of the cause; for that would be for the court of itself to assume to decide many matters of fact, as to the specification, and the combination of machinery in both patents, without any adequate means of knowledge or of guarding itself from gross error. For the purpose of the injunction, if for nothing else, I must take the invention to be the same in both patents, after the Commissioner of Patents has so decided, by granting the new patent.

Upon the whole, therefore, I do order and direct, that the injunction do stand continued, as to the new patent, stated in the supplemental bill, until the hearing or farther order of the court."

[1] Hill *v.* Thompson, 3 Meriv. 622, 624; Sturz *v.* De La Rue, 5 Russ. Ch. R. 322. The same reason exists at the time of the application, although the bill itself was sworn to when filed.

[2] Rogers *v.* Abbott, 4 Wash. 514; Ogle *v.* Eye, Ibid. 584.

[3] See further as to affidavits, *post*, at the end of this chapter.

[4] Act 2d March, 1793, ch. 22, § 5; Perry *v.* Parker, 1 Woodbury & M. 280, 281.

Injunctions, therefore, are not granted in our courts on *ex parte* applications, in cases of patents, although they may be granted on filing the bill and before answer, on notice to the party to be affected, as well as after answer and upon the hearing.

§ 324. The bill and the application being, then, in proper form, the first thing to be considered is, whether the Court will require the patentee to establish his legal right by an action at law, before it grants the injunction, or whether it will grant the injunction, in the first instance, upon the proof of a legal right, furnished by the bill itself, and the accompanying affidavits. Upon this point, the rule, as it was laid down by Lord Eldon, is, that where a patent has been granted, and there has been an exclusive possession of some duration under it, the court will interpose its injunction, without putting the party previously to establish the validity of his patent by an action. But where the patent is but of yesterday, and, upon an application being made for an injunction, it is endeavored to be shown, in opposition to it, that there is no good specification, or otherwise, that the patent ought not to have been granted, the court will not from its own notions upon the matter in dispute, act upon the presumed validity or invalidity of the patent, without the right having been ascertained by a previous trial, but will send the patentee to law, to establish the validity of his patent in a court of law, before it will grant him the benefit of an injunction.[1]

§ 325. The rule thus stated has been followed by our own courts, with further explanations, which extend its application to the particular facts of the cases that have arisen. Thus, Mr. Justice Washington laid down the rule, as follows, that the practice is, to grant an injunction upon the filing of the bill, and before a trial at law, if the bill state a clear right, and verify the same by affidavit. If the bill states an exclusive possession of the invention, or discovery, an injunction is granted, although the court

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[1] Hill *v.* Thompson, 3 Meriv. 622, 624.

may feel doubts as to the validity of the patent. But if the defects in the patent or specification are so glaring that the court can entertain no doubt as to that point, it would be most unjust to restrain the defendant from using a machine, or other thing, which he may have constructed, probably, at great expense, until a decision at law can be had.[1] Upon another occasion, the same learned judge laid down the general rule in these terms, that where the bill states a clear right to the thing patented, which, together with the alleged infringement, is verified by affidavit, if he has been in possession of it, by having used or sold it in part, or in the whole, the court will grant an injunction, and continue it till the hearing, or further order, without sending the plaintiff to law to try the right. But, if there appeared to be a reasonable doubt, as to the plaintiff's right, or as to the validity of the patent, the court will require the plaintiff to try his title at law, sometimes accompanied with an order to expedite the trial, and will permit him to return for an account, in case the trial at law should be in his favor. Mr. Justice Story, in Washburn *v.* Gould, referred to and adopted the general rule laid down by Lord Eldon, in Hill *v.* Thompson. In this case there had been a trial at law, which resulted in favor of the patentee.[2] Mr. Justice Woodbury has, in several cases, also acted upon it, with modifications, which will presently be stated.[3]

§ 326. It appears, therefore, that upon the question of first sending the plaintiff to law to try the validity of his patent, the general rule must be subdivided according to the aspect and position of the case before the court. The cases may be ranged under three different classes. *First*, where there is nothing before the court, as evidence, but the bill and the affidavits in support of it; *second*, where the injunction is asked

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[1] Isaacs *v.* Cooper, 4 Wash. 259, 260.

[2] 3 Story's R. 156, 169.

[3] Orr *v.* Littlefield, 1 W. & M. 13; Woodworth *v.* Hall, Ibid. 248; Hovey *v.* Stevens, Ibid. 290.

before the final hearing, and the respondent offers evidence, either in the answer, or by affidavits, affecting the validity of the patent; *third*, where the question comes on upon the hearing, and the full proofs taken in the cause.

§ 327. These different aspects of the cause may now be considered separately, with reference to this question. *First*, where the plaintiff asks for an injunction upon the bill and affidavits, and no opposing evidence is adduced, but the respondent appears and objects. In such cases, the bill and the affidavits must show the issuing of the patent, and an exclusive possession of the right of some duration; and, when these are shown, although the court may feel some doubts, as to the validity of the patent, the injunction will be granted without a previous trial at law; but if the patent contains glaring defects, so that no doubt can be entertained, or the bill is defective in material allegations, the injunction will not be granted, but the plaintiff will be required to try his title at law.[1] Some additional evidence, besides the mere issue of the patent, must be offered; and this evidence will be the fact, that after he had procured his patent, the plaintiff proceeded to put that right into exercise or use for some time, without being disturbed; a circumstance that strengthens the probability that the patent is good, and renders it so likely, as alone often to justify the issue of an injunction in aid of it.[2] It will also be further additional evidence, in support of the *primâ facie* right to an injunction, that the patentee has successfully prosecuted other persons for violating it.[3]

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[1] Hill *v.* Thompson, 3 Meriv. 622; Harmer *v.* Plane, 14 Ves. 130, 133; Isaacs *v.* Cooper, 4 Wash. 259; Ogle *v.* Ege, Ibid. 584; Woodworth *v.* Hall, 1 Woodbury & M. 248. Length of enjoyment is to be looked to in answer to a theoretical objection to the specification. Rickford *v.* Skewes, Webs. Pat. Cas. 211, 213.

[2] Orr *v.* Littlefield, 1 Woodb. & M. 13, 16. As to length of possession, see the observations of Mr. Justice Woodbury, cited from this case, *post*.

[3] Ibid.

§ 328. *Secondly.* Where the injunction is asked for before the hearing, but opposing evidence is adduced by the respondent against the validity of the patent. In these cases, several elements enter into the rule that is to guide the discretion of the court. How far, and for what length of time there has been an exclusive possession or assertion of the right; how far the respondent has succeeded in raising doubts as to the novelty of the invention, or as to its being a patentable subject, or as to the infringement; and how far a long possession will go to counteract evidence impeaching the validity of the patent — are some of the circumstances to be weighed in determining whether the plaintiff's *primâ facie* right to an injunction has been answered by the respondent, to that extent, that the court will suspend the injunction until the plaintiff has established his right by an action. It seems to be the result of all the authorities that there is a *primâ facie* right to an injunction, without a trial at law, upon certain things being shown, namely, a patent, long possession, and infringement.[1] The question will therefore be, in cases of opposing evidence, where that right has been shown, whether it has been displaced by the respondent.

§ 329. When the presumption in favor of the validity of the patent has been strengthened by evidence of enjoyment and possession undisturbed for several years, and recoveries against other persons for violating it, it will not be sufficient to deprive

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[1] In Neilson *v.* Thompson, Webs. Pat. Cas. 277, Sir L. Shadwell, V. C., said: "It seems to me, on these affidavits, that it is sufficiently made out that there has been a use of the patent in this sense, that the right of the patentee to the benefit of the patent has been submitted to where there has been a contest, and it does not at all appear to me that the general way in which the defendants, on their affidavit, state the mode by means of which the plaintiffs succeeded in establishing the patent, is at all an answer to the two cases which are stated in Mr. Blunt's affidavit. Then I have the case of a patent, having been obtained in the year 1828, and actually enjoyed by the patentee for upwards of twelve years. *Primâ facie*, I apprehend, that gives a right to the patentee to come into court in a case in which he can show an infringement; and the question is, has there been an infringement?"

the plaintiff of the injunction before a trial at law, for the defendant to read affidavits tending to cast doubts on the originality of the invention, especially if that evidence is answered by what is stronger on the part of the patentee.[1]

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[1] Orr *v.* Littlefield, 1 Woodb. & M. 13. In this case, Mr. Justice Woodbury said: "It is not enough that a party has taken out a patent, and thus obtained a public grant, and the sanction or opinion of the patent office, in favor of his right, though that opinion, since the laws were passed, requiring some examination into the originality and utility of inventions, possesses more weight. But the complainant must furnish some further evidence of a probable right; and though it need not be conclusive evidence, — else additional hearing on the bill would thus be anticipated and superseded, — yet it must be something stronger than the mere issue, however careful and public, of the patent, conferring an exclusive right; as, in doing that, there is no opposing party, no notice, no long public use, no trial with any one of his rights. The kind of additional evidence is this: If the patentee, after the procurement of his patent, conferring an exclusive right, proceeds to put that right into exercise or use for some years, without its being disturbed, that circumstance strengthens much the probability that the patent is good, and renders it so likely, as alone often to justify the issue of an injunction in aid of it. Ogle *v.* Ege, 4 Wash. C. C. 584; 2 Story's Eq. Jur. 210; Drew on Injunc. 222; Phil. on Pat. 462. After that, it becomes a question of public policy, no less than private justice, whether such a grant of a right, exercised, and in possession so long, ought not to be protected, until avoided by a full hearing and trial. Harmer *v.* Plane, 14 Ves. 130.

"In this case, the evidence is plenary and uncontradicted, as to the use and sale of this patent, by the inventor and his representative, for several years, publicly and without dispute. Computing from the original grant, the time is over nine years, and since the reissue of the letters-patent it is nearly three. I concur in the opinion delivered by Judge Sprague, in Orr *v.* Badger, that the time to be regarded under this view, is what has elapsed since the original issue or grant. Law Reporter for February, 1845. In Thompson *v.* Hill, 3 Meriv. 622, the time was only three years from the first grant. In Ogle *v.* Eye, 4 Wash. C. C. 584, it was but six years. And though, in some cases reported, it had been thirteen, and in others twenty years, (14 Ves. 120,) yet it is believed, that seldom has a court refused an injunction, in applications like this, on account of the shortness of time after the grant, however brief, if long enough to permit articles or machines to be constructed, by the patentee, in conformity to his claim, and to be sold publicly and repeatedly, and they have been so used and sold, under the patent, without dispute. Here the sales were extensive and profitable, from 1836, downwards, and the right, as well as the possession, does not appear to have

§ 330. But when an injunction is asked before the trial and resisted, and doubts are cast on the originality and validity of

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been contested till 1842. In Hill *v.* Thomson, 3 Meriv. 622, 624, it is true that the court dissolved an injunction, when only about one year had elapsed since any work had been completed under the patent, and only two years since the specification was filed, the chancellor calling it a patent 'but of yesterday,' but he added that he would not dissolve it, if 'an exclusive possession of some duration' had followed; though an answer had been put in, denying all equity, and doubts existed as to the validity of the patent; and no sales under it were proved in that case. So, though the patent had been issued thirteen years, and the evidence is doubtful, as to *acquiescence* in the possession or use, an injunction may be refused. Collard *v.* Allison, 4 Mylne & Craig. 487. But in the present case, the acquiescence appears to have been for several years universal.

"Another species of evidence, beside the issue of the patent itself, and long use and possession under it, so as to render it probable the patent is good, and to justify an injunction, is the fact that if the patent becomes disputed, the patentee prosecutes for a violation of his rights, and recovers. Same authorities; Kay *v.* Marshall, 1 Mylne & Craig, 373. This goes upon the ground, that he does not sleep over his claims or interests, so as to mislead others, and that, whenever the validity of his claim has been tried, he has sustained it as if good. But such a recovery is not regarded as binding the final rights of the parties in the bill, because the action was not between them; though, when the judgment is rendered without collusion or fraud, it furnishes to the world some strong, as well as public assurance, that the patent is a good one. In this view of the evidence of this character, in the present action, it is not contradicted, nor impaired at all, by the judgments having been given on verdicts and defaults, under agreements. Such judgments, when, as is admitted here, not collusive, are as strong, if not stronger evidence of the patentee's rights, than they would have been, if the claim was so doubtful as to be sent to a jury for decision, rather than to be so little doubtful as to be admitted or agreed to, after being legally examined. Both of these circumstances, therefore, possession and judgments, unite in support of an injunction in the present case.

"The only answer to the motion, as made out on these grounds, is, the evidence offered, by affidavits, on the part of the respondents, tending to cast doubt on the originality of the invention of the patentee. I say, tending to this, because some of the affidavits, at least, do not distinctly show that the persons making them, intended to assert that the whole of any one of the combination of particulars contained in Dr. Orr's claim, in his specification, had been used before his patent issued; because, they are counteracted by other testimony, from the witnesses of the complainants, more explicit and

the patent, if the counterbalancing and fortifying circumstances of long possession, use, or sale to a considerable extent, and

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in larger numbers; and because in this preliminary inquiry, where the evidence is taken, without the presence or cross-examination of the opposite party, it would be unsafe to settle and decide against the validity of the patent, when a full and formal trial of it is not contemplated till further progress is made in the case. All that is required in this stage, is, the presumption before named, that the title is good. This presumption is stronger here than usual, as it arises from the issue of the patent, and an enjoyment and possession of it undisturbed for several years, beside the two recoveries against those charged with violating it.

"After these, other persons can, to be sure, contest the validity of the patent, when prosecuted either in equity, or at law; but it is hardly competent for them to deprive the complainant of her right, thus acquired, to an injunction, or, in other words, to be protected in so long a use and possession, till her rights are disproved, after a full hearing; surely it is not reasonable to permit it when the affidavits of the respondents to invalidate or cast a shade over her right are met by that which is stronger, independent of the long possession, judgments, and presumptions, before mentioned. But another objection has been urged in argument. When an answer to the bill denies all equity in it, the respondents contend that an injunction would be dissolved, and hence it ought not to be imposed, if the respondent denies equity by affidavit. This may be correct, in respect to injunctions termed *common*, as these affidavits and counter-affidavits are inadmissible, Eden, 117, 326; yet, in these, the denial must be very positive and clear. Ward *v.* Van Bockelen, 1 Paige, 100; Noble *v.* Wilson, Ib. 164. But the position cannot be correct in the case of injunctions called *special*, like the present one, and where facts and counter-evidence show the case to be different from what is disclosed in the affidavits, or an answer of the respondents alone. No usage or cases are found where the injunctions are dissolved, as a matter of course, on such answers, if the complainant has adduced auxiliary presumptions in favor of his right, like those in the present instance. On the contrary, the cases are numerous, where the whole is regarded as still within the sound discretion of the court, whether to issue the injunction or refuse it; or, if issued, to dissolve or retain it. 3 Meriv. 622, 624; 2 Johns. Ch. R. 202; 3 Sumn. 74; Livingston *v.* Van Ingen, 9 Johns. R. 507, 570; Rodgers *v.* Rodgers, 1 Paige, 426. And where the complainant has made out not merely a grant of the patent, but possession and use, and sale under it, for some time, undisturbed, and beside this, a recovery against other persons using it, the courts have invariably held that such a strong color of title shall not be deprived of the benefit of an injunction, till a full trial on the merits counteracts or annuls it. In several cases, where the

former recoveries under it, do not exist, the injunction will not be allowed before trial.[1]

§ 331. If the respondent succeeds in raising doubts both as to the exclusive possession and as to the novelty of what is claimed, and the evidence on these points is conflicting, the injunction will be refused until a trial.[2]

§ 332. If the question of infringement is doubtful, it must be tried by a jury; and in a case of this kind, Sir L. Shadwell, V. C., dissolved an injunction, and ordered an action to be brought to try the infringement, the respondents being ordered to keep an account, and to admit the plaintiff's title to the patent.[3] The same rule would be applicable to the granting an injunction in the first instance.

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equities of the bill were even denied, and in others, where strong doubts were raised, whether the patent could, in the end, be sustained as valid, the courts decided, that injunctions should issue under such circumstances, as have before been stated in favor of the plaintiff, till an answer or final hearing; or, if before issued, should not be dissolved till the final trial, and then cease, or be made perpetual, as the result might render just. The Chancellor, in Roberts *v.* Anderson, 2 Johns. Ch. R. 202, cites 2 Vesey, 19, and Wyatt's P. R. 236; Boulton *v.* Bull, 3 Ves. 140; Universities of Oxford and Cambridge *v.* Richardson, 6 Ves. 689, 705; Harmer *v.* Plane, 14 Ves. 130; and Hill *v.* Thompson, 3 Mer. 622, 624."

There was a case before Sir L. Shadwell, V. C., where a good deal of doubt, as to the originality of the invention, was raised, by the introduction of a former patent and specification, but the plaintiff had enjoyed uninterrupted possession for seven years; and the infringement being clearly shown, the injunction was granted before trial, and a trial ordered. Losh *v.* Hague, Webs. Pat. Cas. 200. In like manner, Mr. Justice Story held that the affidavit of a single witness, after long possession, and other recoveries on the patent, would not outweigh the oath of the patentee, and the general presumption arising from the grant of the patent. Woodworth *v.* Sherman, 3 Story's R. 171, 172. See also Orr *v.* Badger, 10 Law Reporter, 465.

[1] Hovey *v.* Stevens, 1 Woodb. & M. 290, 303. The patent in this case had been issued less than a month before the infringement complained of.

[2] Collard *v.* Allison, 4 M. & Cr. 487, 488.

[3] Morgan *v.* Seaward, Webs. Pat. Cas. 167.

§ 333. It seems, also, that another element to be considered is, the effect of the injunction on the defendant's business. As the granting of an injunction rests in the discretion of the court exercised upon all the circumstances of the case, and as the object of the injunction is to prevent mischief, it is said that where irreparable mischief would ensue from it to the defendant, it ought not to be granted.[1] But this must be understood as applying to a case where the plaintiff would not be injured by the delay, but would be left in *statu quo* after a trial establishing the validity of his patent; or at least, where the rights of the plaintiff are capable of being fully protected by an account to be kept in the interim; because the object of the court is to preserve to each party the benefit to which he is entitled.[2]

§ 334. Nor will an injunction be granted, where the plaintiff has permitted the defendant to go on and incur expense under the expectation of receiving a certain sum, if the relations between them are such as to allow of the defendants disputing the plaintiff's right as patentee.[3] But it seems that where the defendant is estopped at law from denying the validity of the patent, an injunction will be granted; but if there is a real question to be tried, and a year's rent for the use of the invention is due, the court will order the money to be paid into court, to wait the event of the trial.[4]

§ 335. If the plaintiff shows the necessary possession, and an infringement has actually been committed by the defendant, the injunction will be granted, notwithstanding the defendant admits the infringement and promises not to repeat it.[5]

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[1] Neilson *v.* Thompson, Webs. Pat. Cas. 278, 286.

[2] *Ibid.*

[3] *Ibid.*

[4] Neilson *v.* Fothergill, Webs. Pat. Cas. 287, 289, 290. See further as to injunctions against licensees, post.

[5] Losh *v.* Hague, Webs. Pat. Cas. 200. Sir L. Shadwell, V. C. — "It

§ 336. Third. The third class of cases is where the question of granting the injunction comes on upon the final hearing; and here, the situation of the parties is entirely different from the state of things on an interlocutory motion. The object of a bill in equity to protect a patent is a perpetual injunction; and this in general can only be granted at the hearing; and if granted at the hearing, it will necessarily be perpetual. Objections raised by the defendant, therefore, to the validity of the patent, at the hearing, require a very different consideration from the court; because the question is, whether the court will give any assistance to a party, who might have applied for an interlocutory hearing, and so have given the defendant an opportunity to have had the legal title investigated, but has not done so. In such cases, where there are no circumstances shown which would have prevented the plaintiff from asking for an injunction in the progress of the cause, it will not only not be granted at the hearing, but the bill will be dismissed with costs, if it has been pending for a long time, and the answer had denied the validity of the patent and the fact of infringement.[1]

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really seems to me that this is a case in which I must grant the injunction, because, as I understand it, the wheels that the defendant has made are certainly wheels made according to that thing for which, as I understand it, the plaintiff has taken out his patent, — the substance of part of the patent being for making wheels that shall have the spoke and the felloe in parts of the same piece, that is, in other words, the spoke is to be made with an elbow bend, which elbow bend will constitute a part of the felloes. Now it seems to me that there can be no question, but that the wheels complained of as having been made by the defendant, do answer the description of the plaintiff's wheels, and I do not think it enough on a question of injunction, for the defendant to say why he has done the thing complained of, but will not do it again. That is not the point, because if a threat had been used, and the defendant revokes the threat, that I can understand as making the plaintiff satisfied; but if once the thing complained of has been done, I apprehend this court interferes, notwithstanding any promise the defendant may make not to do the same thing again."

[1] Bacon *v.* Jones, 4 M. & Cr. 433. In this case, Lord Cottenham said, "Generally speaking, a plaintiff who brings his cause to a hearing is expected to bring it on in such a state as will enable the court to adjudicate

§ 337. The next question is, supposing that an injunction is not to be granted *simpliciter*, what course is to be taken. This

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upon it, and not in a state in which the only course open is to suspend any adjudication until the party has had an opportunity of establishing his title by proceedings before another tribunal. And I think the court would take a very improper course, if it were to listen to a plaintiff who comes forward at the hearing, and asks to have his title put in a train for investigation, without stating any satisfactory reason why he did not make the application at an earlier stage. When he comes forward upon an interlocutory motion, the court puts the parties in the way of having their legal title investigated and ascertained; but when a plaintiff has neglected to avail himself of the opportunity thus afforded, it becomes a mere question of discretion, how far the court will assist him at the hearing, or whether it will then assist him at all.

If, indeed, any circumstances had occurred to deprive him of that opportunity in the progress of the cause, the question might have been different. But in this case I have not heard any reason suggested why the plain and ordinary course was not taken by the plaintiffs, of previously establishing their right at law. They might have brought their action before filing the bill, or they might, after the bill was on the file, have had their right put in a train for trial. Instead of that, they have allowed the suit to remain perfectly useless to them for the last four years. They knew of the alleged infringement in the month of August, 1835; and from that time till the hearing there was no moment at which they might not, by applying to the court, have had liberty to bring an action to establish their title at law.

It is obvious that such a line of proceeding exposes a defendant to inconveniences which are by no means necessary for the protection of the plaintiff. It is no trifling grievance to have a chancery suit hanging over him for four years, in which, if the court shall so determine at the hearing, he will have to account for all the profits he has been making during the intermediate period. Is a defendant to be subject to this annoyance without any absolute necessity, or even any proportionate advantage to his adversary, and without that adversary being able to show any reason why he did not apply at an earlier time. It appears to me that it would be very injurious to sanction such a practice, more especially when I can find no case in which the court has thought it right to retain a bill, simply for the purpose of enabling a plaintiff to do that which these plaintiffs might have done at any time within the last four years.

It was much more regular and proper that the plaintiffs should have taken steps for putting the legal right in a course of trial. Those steps they have not chosen to take, and it is now impossible to put the defendants in the

part of the subject embraces the cases where the plaintiff will be sent to try his title at law, without an injunction; and the cases where an injunction will be granted, but the plaintiff will be required to establish his patent at law. The plaintiff will be sent to a court of law, to establish the validity of his patent without a previous injunction, if he does not show long possession and exercise of his exclusive right, where the injunction is resisted by evidence which casts doubt on the originality of his invention, or on the question of infringement, or where the patent contains gross and obvious defects.[1]

§ 338. With regard to the length of time during which possession and exercise of the exclusive right must be shown, it does not appear that any specific lapse of time has been adopted as a standard; and, indeed, it is manifest that no positive rule can be assumed, applicable to all cases. The general principle is, as we have seen, that the time elapsed between the granting of the patent and the application for an injunction must have been sufficient, to have permitted articles or machines, to be constructed by the patentee in conformity with his claim, and to be sold publicly and repeatedly.[2] It must also appear, that the thing has in fact

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same position in which they would have stood if such a course had been originally adopted.

For these reasons, I am of opinion, that the Master of the Rolls, finding that the evidence in the cause was not such as he could act upon with safety, came, in the exercise of his discretion, to a sound conclusion, when he refused to grant the injunction or retain this bill.

I have purposely abstained from saying any thing as to the legal rights of the parties, because I do not think the case in such a state as to enable me to adjudicate upon it.

The appeal must be dismissed with costs."

[1] Hovey *v.* Stevens, 1 Woodb. & M. 290; Ogle *v.* Ege, 4 Wash. 584; Collard *v.* Allison, 4 M. & C. 488; Morgan *v.* Seaward, Webs. Pat. Cas. 167. By defects is to be understood such as raise doubts as to the merits — that is, the originality or usefulness of the patent, or the patentee's own error in the specification. Woodworth *v.* Hall, 1 Woodb. & M. 400. As to defects arising from the acts of public officers, see *post*.

[2] See the observations of the court, cited *ante*, from Orr *v.* Littlefield, 1 Woodb. & M. 13, 17.

been sold publicly, if that is the kind of possession relied on;[1] and where the proof of possession consists of former recoveries, or licenses granted to parties who have been sued and have submitted, if it appears doubtful whether such recoveries and submissions were not collusively obtained, the necessary kind of possession will not be made out, and the right will first have to be tried at law.[2] But it does not impair the effect of such recoveries or submissions, that they were obtained by agreement and without trial, if there was at first a real contest.[3]

§ 339. Where, however, former use or former recoveries are relied upon, as proof of the possession of the exclusive right, they must have been under the same patent, or under a patent connected in law with that under which the application is made; otherwise it will not appear that they related to the same right.[4] But under our system of amending specifications, or of surrendering an old patent and taking out a new one on account of informalities, the right in contemplation of law remains the same, after the issue of the new patent, if it is in

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[1] *Ibid.* Hovey *v.* Stevens, 1 W. & M. 290, 303.

[2] Collard *v.* Allison, 4 M. & Cr. 487, 488; Kay *v.* Marshall, 1 M. & Cr. 373; Orr *v.* Badger, 10 Law Reporter, 465; Orr *v.* Littlefield, 1 W. & M. 13, 17, 18.

[3] Orr *v.* Littlefield, 1 W. & M. 13, 17, 18; Orr *v.* Badger, 10 Law Rep. 465. In Neilson *v.* Thompson, Webs. Pat. Cas. 275, 276, the plaintiff's solicitor proved the preparation and granting of fifty or sixty licenses, and also various infringements by parties who submitted and took a license on proceedings being commenced against them. Sir L. Shadwell, V. C., said, "It seems to me, on these affidavits, that it is sufficiently made out that there has been a use of the patent in this sense, that the right of the patentee to the benefit of the patent has been submitted to where there has been a contest, and it does not at all appear to me that the general way in which the defendants on their affidavit state the mode by means of which the plaintiffs succeeded in establishing the patent is at all an answer to the two cases which are stated in Mr. Blunt's affidavit. Then I have the case of a patent having been obtained in the year 1828, and actually enjoyed by the patentee for upwards of twelve years."

[4] Hovey *v.* Stevens, 1 W. & M. 290.

fact for the same invention ; and consequently a former possession under the old patent will be ground for granting an injunction, without a previous trial, under the amended patent.[1] Usually, where an injunction is not granted, but the plaintiff is required to establish his title at law, the defendant will be ordered to keep an account until the question is determined.[2] It seems, that where both parties claim under patents, the court cannot grant an injunction until the rights have been tried at law.[3]

§ 339. *a*. The cases where an injunction will be granted, but the plaintiff will be required to establish his patent at law, do not admit of any very precise classification under a distinct rule. The court must exercise its discretion upon the circumstances.[4]

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[1] Orr *v*. Badger, 10 Law R. 465.

[2] See Post, as to the account.

[3] This was held in Baskett *v*. Cunningham, 2 Eden's Ch. R. 137, in relation to two conflicting patents for the printing of Bibles; and it has not been overruled by any subsequent case. Nor can it well be overruled, for where there are two conflicting patents, apparently for the same thing, the grounds of undisturbed possession on which injunctions are granted cannot exist.

[4] In Harmer *v*. Plane, 14 Ves. 130, 131, Lord Eldon thus explained the grounds on which an injunction should be granted, in cases where there is so much doubt as to require further investigation. "The ground upon which, where doubt is excited in the mind of the court, an injunction is granted, until the legal question can be tried, a ground that was acted upon in the case of Boulton *v*. Watt, (Boulton *v*. Bull, 2 Hen. Black. 453 ; 3 Ves. 140; Hornblower *v*. Boulton, 8 Term Rep. 95; Hill *v*. Thompson, 3 Mer. 622,) in some cases preceding that, and some that have occurred since, is this: where the crown on behalf of the public grants letters-patent, the grantee, entering into a contract with the crown, the benefit of which contract the public are to have, and the public have permitted a reasonably long and undisputed possession under color of the patent, the court has thought, upon the fact of that possession, proved against the public, that there is less inconvenience in granting the injunction until the legal question can be tried, than in dissolving it at the hazard, that the grant of the crown may in the result prove to have been valid. The question is not really between the parties on the record; for, unless the injunction is granted, any person might violate the patent; and the consequence would be that the patentee must be ruined by litigation. In the case of Boulton and Watt, therefore, though a case of great doubt, upon which some of the ablest judges in Westminster

If the plaintiff has, by proof of possession and enjoyment, made out a *primâ facie* case for an injunction, it will then be for the court to consider whether the nature of the case entitles the defendant to a farther investigation into the validity of the patent or into the fact of infringement. The defendant will have a right to farther investigation, if he shows that there are any questions of fact or of law, which a court of equity does not ordinarily undertake to settle; and this investigation will generally be ordered to take place in an action at law, although it is competent for the court to direct an issue out of chancery.[1]

Hall disagreed, yet upon the ground of the possession by the patentees against all mankind, the injunction was granted, until the question could be tried; and the result of the trial, being in favor of the patent, proved that the conduct of the court in that instance was at least fortunate.

The first of these patents, granted in the 27th year of his present majesty, is expired; and the patent for the improvements was granted in the 34th Geo. III. The agreement, entered into by this defendant, for a license to work under the patentee would not bind the defendant. If the plaintiff could not legally grant that license, there was no consideration; and the question between them, therefore, is entirely open. Still, however, the patentee has had possession against all the world; and if he can maintain its validity by a due performance of the condition as to enrolment of the specification, by dissolving the injunction in the meantime, I should act both against principle and practice; not only enabling this defendant against law to exercise a right in opposition to the patent; but also encouraging all mankind to take the same liberty."

[1] Harmer *v.* Plane, 14 Ves. 130, 131; Hill *v.* Thompson, 3 Meriv. 622, 630; Wilson *v.* Tindal, Webs. Pat. Cas. 730, note. In this case, Lord Langdale, M. R. said, "Having regard to the arguments on the validity of the patent, to the enjoyment of it by the plaintiffs, and to the evidence which appears upon the affidavits which have been made in this case, I am of opinion that the injunction which is applied for ought to be granted.

The question for consideration is, whether any terms ought to be imposed upon the plaintiffs, or whether any other mode of investigating the facts than that which is adopted in the usual course of proceeding in this court ought to be adopted. It is to be observed, that all orders made on applications of this kind, are merely interlocutory orders; they do not bind the right between the parties. The injunction which I have stated it to be my intention to grant, will be an injunction only until further order. It will not be a perpetual injunction; not an injunction to continue during the continu-

§ 340. A denial in the answer, as to the validity of the

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ance of the patent. Notwithstanding this order, the defendant may put in his answer, he may displace all the affidavits which have been filed on both sides. The plaintiff and the defendant may respectively proceed to evidence, they may bring their cause on for a hearing, and upon the hearing of the cause, the whole case, the law regarding the patent, and the facts which will appear upon the depositions, will have to be reconsidered, and that reconsideration may, for any thing that can be known to the contrary, justly end in a result different from that which I have come to upon the present occasion.

The defendant having his option to adopt this course of proceeding, has at the bar expressed his desire to have this matter tried at law. If he was left merely to prosecute a *scire facias* for the repeal of the patent, that would be one part of the question which he might in that way try. But there are other questions subsisting between the parties regarding matters of fact, which could not be tried in that way.

Now it has been stated by Lord Cottenham, that he recollected no instance in which the court has not adopted the course of directing the trial of an action; he has stated that to be the result of his experience. I certainly am very reluctant to try my own memory against that, but I should have supposed that there were instances in which that had been done. It is not the right of parties in every case to have an action tried in a court of law, it is a question of convenience, and the court is to exercise a fair discretion. I have no doubt whatever of the competency of this court to grant an injunction *simpliciter*. Neither had Lord Cottenham any doubt of it. But the question is, whether, when there is an opportunity for carrying the matter further, it is not, on the whole, a convenient course of proceeding to have it tried before the tribunal which is most proper for the consideration of the legal question, and by which the facts can be better investigated than they can here. It is not, therefore, upon the ground of any doubt as to the validity of the patent that I make the order which I am about to make, but it is because the nature of the case entitles the defendant to a further investigation in one form or other, and the most convenient and most effective mode appears to me to be that which has been mentioned, namely, by bringing an action in a court of law. Notwithstanding, therefore, the very forcible arguments I have heard upon this subject, I think I must in this case, as has been done in so many other cases, direct the plaintiff to bring an action to try this right, the injunction being granted in the terms of the notice of motion."

In Russell *v.* Barnsley, Webs. Pat. Cas. 472, Sir L. Shadwell, V. C., said that he did not recollect a case where a defendant had stated his wish to try the question at law, that the court had refused to give him the opportunity.

patent, or the fact of infringement, will be sufficient to entitle the defendant to further investigation in an action at law; but it has been held that, under our system, if the defendant wishes to try the question of originality in an issue out of chancery, he must set out in his answer the names of places and persons where, and by whom the invention had previously been used, because the Act of Congress peremptorily requires notice of these facts, in a trial of this question at law.[1]

§ 341. The fact of the pendency of an action against another party has been held not to be a sufficient ground for continuing an injunction, where the novelty of the invention was denied in the answer, without putting the plaintiff to bring an action against the new defendant.[2]

§ 342. The practice of the court in dissolving, reviving, continuing, or making final injunctions, previously granted, is regulated, in general, by the same rules as the practice of granting them in the first instance. A motion to dissolve an injunction may be made at any time. If made after a trial has been ordered at law, or while an action at law is pending, or while the plaintiff is preparing to bring an action, the decision of the court will be made upon the same principles which governed the granting of the injunction in the first instance; that is to say, the defendant will not succeed in displacing the plaintiff's *primâ facie* right to an injunction, merely by filing an answer, or reading affidavits casting doubts on the validity of the patent, provided the plaintiff is guilty of no unreasonable delay in bringing on the trial; especially, if the plaintiff adduces auxiliary evidence in favor of his right.[3]

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[1] Orr *v.* Merrill, 1 Woodb. & M. 376, 378. *Quære*, whether it would not be a sufficient compliance with the statute, if the court, in directing an issue, were to order the defendant to file a notice of the persons and places, before the issue is tried, without its being contained in the bill.

[2] Russell *v.* Barnsley, Webs. Pat. Cas. 472.

[3] Orr *v.* Merrill, 1 W. & M. 376; Orr *v.* Littlefield, Ib. 13; Orr *v.*

§ 343. Where the motion to dissolve is made after a trial at law has been had, the court will have to look at the result of that trial, and will be governed by the position in which the plaintiff's right has been left. If the proceedings at law are not in a state to be regarded as final, the court will choose to be informed as to the further questions which remain to be investigated. If a verdict has been rendered for the plaintiff, but a new trial has been, or is to be moved for, and if the court can see that there is a question on which an argument might be addressed to the court of law, which might induce it to grant a new trial, the injunction will not be continued, as a matter of course, but the court will endeavor to leave the parties in a situation that will produce, on the whole, the least inconvenience, having regard to all the circumstances of their respective situations.[1]

Badger, 10 Law Rep. 465. In such cases, the injunction should be continued to the next term after that at which the suit at law might be tried to test the title. Orr *v.* Merrill.

[1] Hill *v.* Thompson, 3 Meriv. 622, 628. In this case, the injunction had been dissolved, a trial at law had resulted in a verdict for the plaintiff, who came before the court with a motion to *revive* the injunction. On the part of the defendants, it was stated to be their intention to move for a new trial at law, at the next term, which was as soon as the motion could be made. Lord Eldon said: "In this case, the injunction was first granted upon the strength of the affidavits, which were contradicted, as to their general effect, in the most material points, when it afterwards came before the court upon a motion to dissolve the injunction so obtained. Many topics were then urged on both sides, and fully discussed in argument. It was insisted, on the part of the plaintiff, and the court agreed to that position, that where a person has obtained a patent, and had an exclusive enjoyment under it, the court will give so much credit to his apparent right, as to interpose immediately, by injunction, to restrain the invasion of it, and continue that interposition until the apparent right has been displaced. On the other hand, it was with equal truth stated, that, if a person takes out a patent, as for an invention, and is unable to support it, except upon the ground of some alleged improvement in the mode of applying that which was previously in use, and it so becomes a serious question, both in point of law and of fact, whether the patent is not altogether invalid, then, upon an application to this court for what may be called the extra relief which it affords on a clear

§ 344. Sometimes the court will direct a motion for an injunction to stand over, when none has been granted, until it

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primâ facie case, the court will use its discretion; and, if it sees sufficient ground of doubt, will either dissolve the injunction absolutely, or direct an issue, or direct the party applying to bring his action, after the trial of which, either he may apply to revive, if successful, or else the other party may come before the court, and say, I have displaced all his pretensions, and am entitled to have my costs and the expenses I have sustained, by being brought here upon an allegation of right which cannot be supported. And as, in this instance, the court will sometimes add to its more general directions, that the party against whom the application is made, shall keep an account pending the discontinuance of the injunction, in order that, if it shall finally turn out that the plaintiff has a right to the protection he seeks, amends may be made for the injury occasioned by the resistance to his just demands. In his directions to the jury, the judge has stated it as the law on the subject of patents — first, that the invention must be novel; secondly, that it must be useful; and thirdly, that the specification must be intelligible. I will go further, and say, that not only must the invention be novel and useful, and the specification intelligible, but also that the specification must not attempt to cover more than that which, being both matter of actual discovery, and of useful discovery, is the only proper subject for the protection of a patent. And I am compelled to add, that, if a patentee seeks, by specification, any more than he is strictly entitled to, his patent is thereby rendered ineffectual, even to the extent to which he would be otherwise fairly entitled. On the other hand, there may be a valid patent for a new combination of materials, previously in use, for the same purpose, or for a new method of applying such materials. But, in order to its being effectual, the specification must clearly express that it is in respect of such new combination or application, and of that only, and not lay claim to the merit of original invention in the use of materials. If there be a patent both for a machine and for an improvement in the use of it, and it cannot be supported for the machine, although it might for the improvement merely, it is good for nothing altogether, on account of its attempting to cover too much. Now, it is contended, that what is claimed by the present patent is not a novel invention; that the extraction of iron from slags or cinders was previously known and practised; that the use of lime in obstructing 'cold short' was likewise known. But to all this it is answered, that the patent is not for the invention of these things, but for such an application of them as is described in the specification. Now, the utility of the discovery, the intelligibility of the description, &c., are all of them matters of fact proper for a jury. But whether or not the patent is defective, in attempting to cover too much, is a question of law, and as such, to be considered in all ways that it is convenient for the pur-

can be ascertained what the result of an application for a new trial is to be; and where a rule, to show cause why a new trial should not be had, had been granted, an injunction was refused, it not having been allowed before.[1]

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poses of justice that it should be considered. This specification generally describes the patent to be 'for improvements in the smelting and working of iron;' and it then goes on to describe the particulars in which the alleged improvements consist, describing various proportions in the combination of materials, and various processes in the adhibition of them. The question of law, upon the whole matter, is, whether this is a specification by which the patentee claims the benefit of the actual discovery of lime as a preventive of 'cold short,' or, whether he claims no more than the invention of that precise combination and those peculiar processes which are described in the specification. And, when I see that this question clearly arises, the only other question which remains is, whether I can be so well satisfied with respect to it as to take it for granted, that no argument can prevail upon a court of law, to let that first question be reconsidered by granting the motion for a new trial. If this be a question of law, I can have no right whatever to take its decision out of the jurisdiction of a court of law, unless I am convinced that a court of law must and will consider the verdict of the jury as final and conclusive. But this only brings it back to the original question; and I see enough of difficulty and uncertainty in the specification, and enough of apparent repugnance between the specification and the patent itself, to say that it is impossible I can arrive at such a conclusion respecting it, as to be satisfied that there is no ground for granting a new trial. In the order I formerly pronounced was contained a direction, that the defendant should keep an account of iron produced by their working in the manner described in the injunction. If the injunction is to be now revived, the whole of their establishment must be discharged between this and the fourth day of next term, when it is intended to move for a new trial, the result of which may be, that the defendants have a right to continue the works; to do which, they will then be under the necessity of recommencing all their operations, and making all their preparations and arrangements *de novo*. It appears to me that this would be a much greater inconvenience than any that can result from my refusal, in the present instance, to revive the injunction. My opinion, therefore, is, that this matter must stand over till the fifth day of next term, when I may be informed of the result of the intended application for a new trial; the account to be taken in the meantime as before."

[1] There is a recent case where an injunction was applied for and refused, and the plaintiff was directed to bring an action, which was tried and a verdict found for the plaintiff. The motion for the injunction was then renewed;

§ 345. This course of proceeding shows that when a new trial has been or is intended to be applied for, a court of equity will generally leave the parties in the situation in which they stood before the trial. If no injunction had been previously granted, the court will not increase the defendant's burdens by imposing one, as long as the plaintiff's right remains doubtful at law. But if an injunction has been granted and the plaintiff has succeeded at law, it would seem, that the injunction ought not to be dissolved, on the mere suggestion that there is ground for a new trial, unless the court sees what Lord Eldon called "sufficient ground of doubt" of the plaintiff's right; but that the court will exercise its discretion, and if it sees reason for dissolving the injunction, it will direct the defendant to keep an account pending the discontinuance of the injunction, in order that, if it finally turns out that the plaintiff has a valid patent, he may receive amends for the injury occasioned by the resistance to his just demands.[1] After a trial and judgment at law, in favor of the plaintiff, the injunction will be revived or granted as matter of course.[2] How far the court will undertake to look into the regularity of such a judgment, and to determine, on the suggestion of the defendant, whether there is probable ground for a writ of error, and therefore to suspend the injunc-

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but it appeared on affidavit, that a bill of exceptions had been tendered, and that the defendants also intended to move for a new trial. The Lord Chancellor directed the application to stand over until the result of these proceedings should be known. Shortly afterwards a rule *nisi*, for a new trial, was obtained, and then the motion for the injunction was brought on again. The Lord Chancellor said, that under the circumstances in which the case stood at law, a rule to show cause why a new trial should not be had, having been granted — he must consider the legal title of the parties as still undecided; and he therefore refused the application. Collard *v.* Allison, 4 M. & Cr. 487, 490.

[1] See the observations cited *ante*, from Hill *v.* Thompson. See further as to ordering an account, *post*.

[2] Neilson *v.* Harford, (Cor. Lord Lyndhurst in 1841,) Webs. Pat. Cas. 373.

tion, is a question which has not arisen in this country; but it seems that in England, the Lord Chancellor has so far entertained an application of this kind, as to look into the proceedings at law and the grounds of the judgment, and to satisfy himself that no good reason existed for departing from the usual course of reviving the injunction after a judgment in favor of the plaintiff.[1]

§ 346. An important part of the remedial process in equity is the account of profits made by the defendant. Sometimes an account is ordered to be kept, in lieu of granting or continuing an injunction, and it is always ordered when the injunction is made perpetual, unless the amount would be very small. The cases in which an account is ordered to be kept either with or without an injunction, during the pendency of an action in which the right is to be tried, proceed upon the principle that the plaintiff may turn out to be entitled to the right, and he is more secure of ample justice if the account of the defendant's profits is kept while he is using the invention, than if it were deferred to be taken at a future time, especially if the defendant is left at liberty to make new contracts.[2] Such an account will be ordered, if the injunction is dissolved by reason of the irreparable injury it would do to the defendant's business.[3]

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[1] Ibid.

[2] Hill *v.* Thompson, 3 Meriv. 626, 631; Crossley *v.* Derby Gas Light Company, Webs. Pat. Cas. 119; Neilson *v.* Fothergill, Ibid. 290; Morgan *v.* Seaward, Ibid. 168; Bacon *v.* Jones, 4 M. & Cr. 436.

[3] Neilson *v.* Thompson, Webs. Pat. Cas. 278, 285. In this case Lord Cottenham said, "Nothing that took place could preclude the defendants from the right of disputing the plaintiff's right as a patentee, but they have at very considerable expense, erected this machinery, and from that time to the present have been using it, the plaintiff being aware of it, at least from some time in 1839, (the precise day is not stated) and stood by and permitted them to do this. If he is entitled as patentee it would be extremely hard for the court to do any thing to prevent his receiving that which he is entitled to receive, and in expectation of which he permitted the defendants to go on with their works. But on the other hand, it would be extremely hard

§ 347. Sometimes, as a further means of doing justice between the parties, upon the question of infringement, when an action at law is to be tried, the court will order a mutual inspection of the plaintiff's and defendant's works. The object in so doing is to enable the parties, on the trial, to give such evidence as

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indeed to tell the defendants that they shall not use the works, which, with the plaintiff's knowledge, they have prepared at a very considerable expense; and as to telling them they may go on with the cold blast instead of the hot blast, I am told that the difference between the use of the one and the other is an expense of nearly double, even if it were possible; at all events they may sustain that loss in the interval until the right is tried. It seems to me that stopping the works, by injunction, under these circumstances, is just inverting the purpose for which an injunction is used. An injunction is used for the purpose of preventing mischief; this would be using the injunction for the purpose of creating mischief, because the plaintiff cannot possibly be injured. All that he asks, all that he demands, all that he ever expects from these defendants is one shilling per ton. He has not a right to say to them, you shall not use this apparatus; he cannot do so after the course of conduct he has adopted; he may no doubt say with success, if he is right, you shall pay me that rent which the others pay, and in the expectation of which I permitted you to erect this machinery. Therefore, in no possible way can the plaintiff be prejudiced; but the prejudice to the defendants must be very great indeed, if they are for a short period prevented from using at their furnaces that apparatus which, with the consent of the plaintiff, they have erected. The object, therefore, is, pending the question, which I do not mean to prejudice one way or the other by any thing I now say, to preserve to the parties the opportunity of trying the question, with the least possible injury to the one party or the other; and I think the injunction would be extremely prejudicial to the defendants, and do no possible good to the plaintiff for the purpose for which it may be used. It may, by operating as a pressure upon the defendants, produce a benefit, but that is not the object of the court; the object of the court is to preserve to each party the benefit he is entitled to, until the question of right is tried, and that may be entirely secured by the defendants undertaking to keep an account, not only for the time to come, but from the time when the connection first commenced, and undertaking to deal with that account in such a way as the court may direct; and if the plaintiff is entitled, the court will have an opportunity of putting the plaintiff precisely in the situation in which he would have stood if the question had not arisen. If it shall turn out that the patent is not valid, the court will deal with it accordingly, and that will, I think, most effectually prevent all prejudice."

will tend to prove or disprove the fact of infringement. For this purpose inspectors or viewers are appointed, under the direction of the court, who are to be admitted as witnesses on the trial at law. If the parties do not agree on the persons to be appointed, the court will appoint them.[1]

§ 348. When the validity of the patent is fully established, an account will be ordered of all the profits made by the defendant, to be taken by a master; and if the patent has expired, the account and the injunction will extend to all the articles piratically made during the existence of the patent, though some of them may remain unsold.[2]

§ 349. An injunction should not be dissolved merely on account of doubts as to the validity of the patent, which arise from objections to the technical form or signature of the letters, or other acts or omissions of the public officers, and not from any neglect or wrong of the patentee.[3]

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[1] Morgan *v.* Seaward, Webs. Pat Cas. 168; Russell *v.* Cowley, Ibid. 457. See these cases for the decrees appointing such inspectors.

[2] Crossley *v.* Beverley, Webs. Pat. Cas. 119; Crossley *v.* Derby Gas Light Company, Ibid. 119, 120. In this case a very curious difficulty occurred in estimating the "profits." The plaintiff was the owner of a patent for making gas-meters, which the defendants had made, and sold and employed in their works. The profits to be ascertained were the benefits derived from the use of the meters, in enabling the defendants to furnish gas to their customers at a lower rate than they could have done without them, and so to obtain additional profits from an increased consumption. It was a case, therefore, presenting the uncertain elements of profits made by the application of particular means, and a just distribution of those profits to a particular agent employed. The case does not furnish any principles, as it is reported. See 3 Mylne & Cr. 428, 430.

[3] Woodworth *v.* Hall, 1 Woodb. & M. 389, 400. In this case, Mr. Justice Woodbury said, "Finally, it is contended that if any doubt exists as to the validity of a patent, as some assuredly does here, as before stated, the injunction should be dissolved. This may, with some qualification as to the matters connected with the subject, be true in granting an injunction, as laid down in 4 Wash. C. C. 584, if the doubt relate to the merits — that is, the

§ 350. Upon the question of granting an injunction against a party who has had the use of the invention by permission or grant of the patentee, the doctrine seems to be this. A party who has had such use of an invention, under a contract for an annual rent, or other estimated rate of payment, may discontinue the payment, and, if he still use the invention, the patentee may sue him for the rent due, or for an infringement. If an action is brought for the rent, and the defendant is not estopped by the terms of his contract from denying the validity of his patent, the plaintiff cannot recover without giving him an opportunity to do so.[1] The same is true under an action for the infringement, if the defendant is not estopped.[2] Where, therefore, a court of equity does not see that the defendant is estopped from denying the validity of the patent, but that he has a right to resist the patent, it will deal with a

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originality or usefulness of a patent, or a patentee's own error in his specification. But, when the objection relates to the technical form or signature of papers connected with the letters, and the doubts arise from acts of public officers, and not any neglect or wrong of the patentee, the position seems to me not sound. More especially should an injunction, once granted, not be disturbed for such doubts, when, as in this case, the term for trial of the merits is near; and the allowing such doubts to prevail, even to the extent of dissolving an injunction, might not merely affect the present patent and present parties, but operate injuriously on all other patents and parties where, for the last ten years, by a cotemporaneous and continued construction of the patent law, chief clerks have, under its authority, signed patents or other important papers as acting commissioner, in the necessary absence of the commissioner, or made mistakes of a clerical character in the form of the letters. In my opinion, so far from its being proper, under such circumstances, to dissolve an injunction for doubts on such technical objections, it is rather the duty of the court, if, as here, mischievous consequences are likely to ensue to others from interfering, and if, as here, legislative measures have been recommended by the public officers, which are pending, to remedy or obviate the possible evil from any public mistakes, not to dissolve an injunction already granted, unless required to do it by imperative principles of law, showing the letters-patent to be clearly void."

[1] Hayne *v.* Maltby, 3 T. R. 438.

[2] As to estoppel and failure of consideration, see Bowman *v.* Taylor, 2 Ad. & E. 278, and other cases collected in Webs. Pat. Cas. 290, note.

defendant who has used under a license or other contract, or under permission, upon the question of injunction, as it deals with other defendants; and, as we have seen, if the bill which prays for an injunction, also shows that rent is due by contract, the court will order the money to be paid into court, to await the result of an action at law.[1]

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[1] Neilson *v.* Fothergill, Webs. Pat. Cas. 287, 288. The bill showed that the plaintiffs had called on the defendants for an account of the iron smelted by the use of the invention, in order to ascertain the sum due, and that the defendants had rendered an account in writing of all the iron smelted by them up to the 2d of August, 1839, and duly paid one shilling per ton on the same; that the plaintiff had applied to the defendants for an account of the iron smelted since the 2d day of August, 1839, and for like payments, but the defendants had refused. It appeared that the draft of a license was sent to the defendants, containing amongst others a clause for revoking the license upon the non-payment of the rent, *and that this license was kept;* that the payments were made in conformity to it, and that the plaintiffs, after August, 1839, *revoked the license.* An injunction had been granted, which the defendants now moved to discharge. Lord Cottenham, L. C. — "This case is deprived of those circumstances upon which I acted in the other, namely, the party who claims to be patentee permitting them to incur expense, in the expectation of being permitted to use the furnaces upon the payment of the rent, which is all the plaintiff requires. But here, all that is accounted for, because that was done under a contract, and for two years at least the party has had the benefit of the works which he has so erected, and the patentee has kept his contracts with the defendant; he has not interposed and endeavored to deprive them of the benefit of their expenditure. It is the act of the manufacturer which has put an end to this connection; he has, therefore, exposed himself to any degree of injury that may arise from the expenditure upon these works, and it appears that there is no answer to the claim to this rent from August, 1839, to August, 1840. I shall have to consider, if your client declines to escape from the injunction upon the terms I propose to him, whether the injunction should not go in a case which is deprived of those equitable circumstances which induced me to dissolve it in the others. (Wigram: Your lordship will give me the benefit of the supposition, that, at law, I have a defence if the patent is good for nothing.) If you can show me that there is a real question to try, the money must be paid into court instead of being paid to the parties; but at all events, I do not see how far that year, from August, 1839, to August, 1840, when you went on under the contract without giving notice to determine, you can escape paying it, either

§ 351. It has been held that in a bill in equity for a perpetual injunction, it is a good defence, that prior to the granting of

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into court to abide the event of the trial of the question at law, or paying it to the party, if there is no question to try.

Wigram, in reply. Your lordship said you should consider, whether, since August, 1840, we were to be considered as holding adversely, and, therefore, whether liable or not to pay for what was gone by, we were at all events wrong-doers. And then you put me to show, whether I could not in law defend myself for what was said to be due in August, 1840. The principle which I have always understood to govern cases of this sort is this, that, excluding the law of estoppel, if you go into a court of law, and can show a total failure of consideration for the contract, there you may always defend yourself; if, on the other hand, you cannot make out a case of total failure of consideration, you are liable upon your contract, and you may or may not have your cross action. This is the general principle in these cases, subject to the question, whether that which has been done may or may not amount to an estoppel. The whole question in the case of Bowman *v.* Taylor, relied upon for the plaintiff was, whether or not there could be an estoppel by recital, and it was held that there could. In Hayne *v.* Maltby, the question was, whether there was any estoppel, there being no recital of the plaintiff's title, but only an agreement and a covenant to pay, and the court held that there was not. In that case Mr. Justice Ashurst said, the plaintiffs use this patent as a fraud on all mankind, and they state it to be an invention of the patentee, when in truth it was no invention of his. The only right conferred on the defendant by the agreement was that of using this machine, which was no more than that which he in common with every other subject has, without any grant from the plaintiff. That is exactly our case. We say that all mankind have a right to use it, but that some people have taken licenses, supposing it to be the plaintiff's invention. On the money then being paid into court, the injunction should be dissolved.

Lord Cottenham, L. C.: — The case of Hayne *v.* Maltby appears to me to come to this — that although a party has dealt with the patentee and has carried on business, yet that he may stop, and then the party who claims to be patentee cannot recover without giving the other party the opportunity of disputing his right, and that if the defendant successfully dispute his right, that notwithstanding he has been dealing under a contract, it is competent to the defendant so to do. That is exactly coming to the point which I put, whether at law, the party was estopped from disputing the patentee's right, after having once dealt with him as the proprietor of that right: and it appears from the authority of that case, and from the other cases, that from the time of the last payment, if the manufacturer can successfully resist the

the patent, the inventor had allowed the invention to go into public use, without objection; but that it should be clearly established by proof, that such public use was with the knowledge and consent of the inventor.[1] This is the same as one of the statute defences against an action at law, which may all be made, pursuant to the statute, in equity, if the defendant chooses, although the statute has expressly made them defences only in an action at law.

§ 352. If the patentee, after obtaining his patent, dedicates or surrenders it to public use, or acquiesces for a long period in the public use of his invention, without objection, he is not entitled to the aid of a court of equity to protect it; and such acquiescence may amount to complete proof of a dedication or surrender to the public. The ground upon which a court of equity refuses to interfere in such cases, is, that by his own conduct the plaintiff may have led or encouraged the defendant to make use of his invention.[2]

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patent right of the party claiming the rent, that he may do so in answer to an action for the rent for the use of the patent during that year. That being so, I think that, upon the money being paid into court, that is to say, upon the amount of the rent for that year being paid into court, (if required,) and the same undertaking being given to account for the subsequent period, the same order ought to be made in this case as in the others. There must be an undertaking to deal with the amount of that in the same way as before. The great difficulty in this case, which, however, is surmounted in the undertaking, is, that the said suit does not go to that year's rent."

[1] Wyeth *v.* Stone, 1 Story's R. 273.

[2] Ibid. In this case, Mr. Justice Story said, "In the next place, as to Wyeth's supposed abandonment of his invention to the public since he obtained his patent, I agree, that it is quite competent for a patentee at any time, by overt acts or by express dedication, to abandon or surrender to the public for their use, all the rights secured by his patent, if such is his pleasure, clearly and deliberately expressed. So, if for a series of years, the patentee acquiesces without objection, in the known public use by others of his invention, or stands by and encourages such use, such conduct will afford a very strong presumption of such an actual abandonment or surrender.

§ 353. But although it is a principle of equity, that a patentee must not lie by, and by his silence or acquiescence induce

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A fortiori, the doctrine will apply to a case, where the patentee has openly encouraged or silently acquiesced in such use by the very defendants, whom he afterwards seeks to prohibit by injunction from any further use; for in this way, he may not only mislead them into expenses, or acts, or contracts, against which they might otherwise have guarded themselves; but his conduct operates as a surprise, if not as a fraud upon them. At all events, if such a defence were not a complete defence at law, in a suit for any infringement of the patent, it would certainly furnish a clear and satisfactory ground why a court of equity should not interfere either to grant an injunction, or to protect the patentee, or to give any other relief. This doctrine is fully recognized in Rundell *v.* Murray, (Jacobs's R. 311, 316,) and Saunders *v.* Smith, (3 Mylne & Craig, 711, 728, 730, 735.) But if there were no authority on the point, I should not have the slightest difficulty in asserting the doctrine, as founded in the very nature and character of the jurisdiction exercised by courts of equity on this and other analogous subjects.

There is certainly very strong evidence in the present case, affirmative of such an abandonment or surrender, or at least of a deliberate acquiescence by the patentee in the public use of his invention by some or all of the defendants, without objection for several years. The patent was obtained in 1829; and no objection was made, and no suit was brought against the defendants for any infringement until 1839, although their use of the invention was, during a very considerable portion of the intermediate period, notorious and constant, and brought home directly to the knowledge of the patentee. Upon this point I need hardly do more than refer to the testimony of Stedman and Barker, who assert such knowledge and acquiescence for a long period, on the part of the patentee, in the use of these ice-cutters by different persons, (and among others by the defendants,) on Fresh Pond, where the patentee himself cut his own ice. It is no just answer to the facts so stated, that until 1839, the business of Wyeth, or rather of his assignee, the plaintiff, Tudor, was altogether limited to shipments in the foreign ice-trade, and that the defendant's business, being confined to the domestic ice-trade, did not interfere practically with his interest under the patent. The violation of the patent was the same, and the acquiescence the same, when the ice was cut by Wyeth's invention, whether the ice was afterwards sold abroad, or sold at home. Nor does it appear, that the defendants have as yet engaged at all in the foreign ice-trade. It is the acquiescence in the known user by the public without objection or qualification, and not the extent of the actual user, which constitutes the ground, upon which courts of equity refuse an injunction in cases of this sort. The acquiescence in

another to go on expending his money and incurring risk, and afterwards, if profit is made, come and claim a share in the profit, without having been exposed to share in the losses; yet delay to institute his proceedings may be explained by the difficulty of getting evidence of the infringement.[1]

§ 354. It has already been stated that in all cases of proceedings in equity to restrain the infringement of patents, in the courts of the United States, the injunction can, at no time, be applied for without notice to the adverse party, giving him an opportunity to oppose it; and, therefore, the injunction is always *special*.[2] Where the injunction is applied for before an

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the public use, for the domestic trade, of the plaintiff's invention for cutting ice, admits, that the plaintiff no longer claims or insists upon an exclusive right in the domestic trade under the patent; and then he has no right to ask a court of equity to restrain the public from extending the use to foreign trade, or for foreign purposes. If he means to surrender his exclusive right in a qualified manner, or for a qualified trade, he should at the very time give public notice of the nature and extent of his allowance of the public use, so that all persons may be put upon their guard, and not expose themselves to losses or perils, which they have no means of knowing or averting, during his general silence and acquiescence.

The cases which have been already cited, fully establish the doctrine, that courts of equity constantly refuse injunctions, even where the legal right and title of the party are acknowledged, when his own conduct has led to the very act or application of the defendants, of which he complains, and for which he seeks redress. And this doctrine is applied, not only to the case of the particular conduct of the party towards the persons, with whom the controversy now exists, but also to cases where his conduct with others may influence the court in the exercise of its equitable jurisdiction. (Rundell *v.* Murray, Jacobs's R. 311, 316; Saunders *v.* Smith, 3 Mylne & Craig, 711, 728, 730, 735.) Under such circumstances, the court will leave the party to assert his rights, and to get what redress he may at law, without giving him any extraordinary aid or assistance of its own."

[1] Crossley *v.* Derby Gas Light Company, Webs. Pat. Cas. 119, 120. As to what would be reasonable time, in certain circumstances, see Losh *v.* Hague, Webs. Pat. Cas. 200, 201.

[2] For the distinction between *common* and *special* injunctions, see 2 Story's Eq. Jurisp. § 892.

answer has been filed, the plaintiff, in addition to the allegations in his bill, must read affidavits to show his title, and the fact of infringement, especially if the defendant appears and offers evidence against the one or the other; and these affidavits should, in strictness, cover the issuing of the patent, the novelty of the invention, and all other facts necessary to the title.[1] It is believed, however, that in our practice, where the whole title is set out in the bill, which is sworn to, if the defendant does not read affidavits denying the title, it is not usual to read them in support of the title, which is considered as verified by the bill itself. But, if the defendant attacks the title by affidavit, it must be supported by auxiliary proof in addition to the bill, in order to make out the *primâ facie* right to an injunction.

§ 355. In one of the circuit courts of the United States some doubt has been thrown over the question, whether the plaintiff is at liberty to read affidavits in support of his title, after an answer denying it. Mr. Justice McLean has held that on an application for an injunction, after an answer, the plaintiff is not entitled to read affidavits to contradict the answer upon the point of title.[2] Mr. Justice Woodbury, on the contrary, has held that the plaintiff may show from counter evidence that the case is different from that disclosed in the affidavits, or answer of the defendant, and thus proceed to fortify his right to an injunction.[3] I am inclined, after some examination of the point, to think that the latter is the more correct opinion.[4] It is set-

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[1] Daniels Ch. Pr. 1890, 1891, Amer edit. 1846; Hindmarch on Patents, 332, and cases cited.

[2] Brooks *v.* Bicknell, 3 McLean, 250, 255.

[3] Orr *v.* Littlefield, 1 W. & M. 13, 19. See the observations cited from this case, *ante*.

[4] If Mr. Justice McLean is to be understood to mean that the plaintiff is not at liberty to read affidavits in support of the novelty of his invention, after an answer denying it, it would seem that the practice and other authorities are opposed to his position. In the case above cited, (Brooks *v.* Bicknell,) the principal ground of objection to the plaintiff's title, was, that the

tled, in this circuit, by a decision referred to in the note below, by Mr. Justice Story, that the whole question of granting or dis-

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patent had been illegally extended; and the opinion does not expressly affirm that the plaintiff may not adduce evidence against the answer, to support the novelty of his invention, although this is implied in the observations of the court. It is, however, clear, that there is a distinction between common and special injunctions on this point. In Hill *v.* Thompson, 3 Meriv. 622, 624, the leading case on the subject of injunctions in patent causes, where Lord Eldon laid down the rules that have since been followed by all judges, an injunction had been obtained until answer, or further order; on the coming in of the answer, the defendants moved to dissolve. The report does not expressly state that the answer denied the validity of the patent, but as this was the only question discussed, it is obvious that the answer must have contained such a denial; and it appears that a variety of affidavits were produced on both sides, tending respectively to impeach, and to assert the validity of the patent, and of the injunction to restrain the breach of it; and amongst them, was an affidavit by the plaintiff on the point of novelty. The same reasons for allowing affidavits of title to be read on a motion for dissolving an injunction, apply to motions for granting it, in the first instance, where the answer has been filed. Now, upon the practice of reading such affidavits on a motion to dissolve, there has been a considerable conflict of decisions. But a distinction was adopted, at a very early period, with regard to injunctions for restraining certain wrongful acts of a special nature, as distinguished from the common injunction for staying proceedings at law. It is the settled practice of the court, in England, to allow affidavits to be read, at certain stages, against the answer, in cases of waste, and of injuries in the nature of waste; but, in cases of waste, they must be confined to the acts of waste, and the title, it is said, must be taken from the answer. Drewry on Injunc. 429; Gibbs *v.* Cole, 3 P. Will. 255; Norway *v.* Rowe, 19 Ves. 146, 153; Smythe *v.* Smythe, 1 Swanst. 254, and cases collected in the note. The question is, whether the same rule applies to cases of patents, or, whether they do not stand, in respect to the admission of affidavits on the point of title, upon the reason of the rule which permits affidavits in cases of waste upon the facts of waste. The ground of permitting affidavits to be read on the part of the plaintiff, in cases of waste, is, that the mischief is irreparable; the timber, if cut, cannot be set up again, so that the mischief, if permitted, cannot be retrieved. The same reason exists in cases of partnership, by analogy to waste. Peacock *v.* Peacock, 19 Ves. 49. Does not this reason apply to a denial of the novelty of the plaintiff's invention? Such a denial in the answer, the defendant has a right to make, and to have it tried at law; but if the denial is to be taken as true, on a

solving injunctions, in cases of irreparable mischief, rests in the sound discretion of the court, after answer, as well as before.

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motion to grant, or to dissolve an injunction, it may work an irreparable mischief before the plaintiff can establish his right at law; and yet, this is the consequence of adopting the rule, that, in cases of patents, the title is to be taken from the answer, on motions for an injunction. The court must either assume that the denial in the answer, upon the point of novelty, is true, and, therefore, the plaintiff cannot have an injunction in any case, of however long possession, where the defendant chooses to make this denial; or it must say, that, however strong the denial in the answer, the plaintiff shall always have his injunction; or it must look into the evidence on both sides sufficiently to determine whether it is probable that the plaintiff will be able to establish his patent, and grant or withhold the injunction accordingly. The latter was the course taken by Mr. Justice Woodbury, in Orr *v.* Littlefield, where, however, an answer had not been filed, the defendant relying on affidavits; but the reasoning of the learned judge makes the same course applicable to cases where the equity of the bill is denied by the answer. See the observations of the court, cited *ante*, p. 372. There is a dictum of Lord Langdale, M. R. in Wilson *v.* Tindal, Webs. Pat. Cas. 730, (cited *ante*, p. 382); that "notwithstanding this order (the injunction) the defendant may put in his answer, he may displace all the affidavits which have been filed on both sides." This I conceive to mean merely, that the defendant may show such a case in his answer, as to control the *primâ facie* case made by the plaintiff; and not that the answer necessarily displaces the affidavits before filed. In Poor *v.* Carleton, 3 Sumner, 70, 83, Mr. Justice Story reviewed this whole subject, and laid down the broad doctrine that the granting and dissolving injunctions, in cases of irreparable mischief, rests in the sound discretion of the court, whether applied for before, or after answer; and that affidavits may, after answer, be read by the plaintiff to support the injunction, as well as by the defendant to repel it, although the answer contradicts the substantial facts of the bill, and the affidavits of the plaintiff are in contradiction of the answer.

CHAPTER IV.

EVIDENCE.

§ 356. The evidence appropriate to the different stages of a patent cause may be divided into (1) the evidence of title, and (2) the evidence upon the point of infringement. Evidence of title relates to the letters-patent, and the plaintiff's interest therein, the novelty and utility of the invention, and the sufficiency of the specification. Evidence of the infringement relates to the identity of the thing made, used, or practised by the defendant, with the invention of the patentee.

§ 357. I. *As to the plaintiff's title.* With regard to the letters-patent, the Statute of 1836, §§ 4, 5, makes a copy under the seal of the patent office and the signature of the commissioner, competent evidence that a patent has been granted by the government for the invention described in the specification annexed. If the patent produced in evidence refers to the description in a former patent, it is necessary to produce and read that former patent, in order to show what the invention is, if it is not made entirely clear and intelligible by the patent on which the action is brought.[1]

§ 358. The letters-patent being thus proved to have issued, they are *primâ facie* evidence that the patentee was the first inventor of the thing patented.[2] The reason upon which this

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[1] Lewis *v.* Davis, 3 C. & P. 502.

[2] Alden *v.* Dewey, 1 Story's R. 336; Woodworth *v.* Sherman, 3 Story's R. 172; Stearns *v.* Barrett, 1 Mason, 153. It is also held in England, that

is held is, that our statute requires the patentee to make oath that he is the first and true inventor of the thing; and when the patent has issued, supported by this oath, the burthen of proof is cast upon the party who would object, to show that the grant has been improperly obtained by the patentee; because the law presumes, in the first instance, that the patent has been granted upon the proofs which the statute requires to be laid before the officers of the government, and that those proofs were satisfactory.[1]

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the patent is *primâ facie* evidence on the part of the person claiming the right, that he is so entitled. Minter *v.* Wells, Webs. Pat. Cas. 129.

[1] In the Philadelphia and Trenton Railroad Company *v.* Stimpson, 14 Peters, 458, Mr. Justice Story, delivering the opinion of the Supreme Court of the United States, said, "Now the objection is, that the present patent does not contain any recitals that the prerequisites thus stated in the act have been complied with, viz., that the error in the former patent has arisen by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention; and that without such recitals, as it is the case of a special authority, the patent is a mere nullity and inoperative. We are of opinion that the objection cannot, in point of law, be maintained. The patent was issued under the great seal of the United States, and is signed by the President, and countersigned by the Secretary of State. It is a presumption of law, that all public officers, and especially such high functionaries, perform their proper official duties until the contrary is proved. And where, as in the present case, an act is to be done, a patent granted upon evidence and proofs to be laid before a public officer, upon which he is to decide, the fact that he has done the act or granted the patent, is *primâ facie* evidence that the proofs have been regularly made, and were satisfactory. No other tribunal is at liberty to reëxamine or controvert the sufficiency of such proofs, if laid before him, when the law has made such officer the proper judge of their sufficiency and competency. It is not, then, necessary for the patent to contain any recitals that the prerequisites to the grant of it have been duly complied with, for the law makes the presumption; and if, indeed, it were otherwise, the recitals would not help the case without the auxiliary proof that these prerequisites had been, *de facto*, complied with. This has been the uniform construction, as far as we know, in all our courts of justice upon matters of this sort. Patents for lands, equally with patents for inventions, have been deemed *prima facie* evidence that they were regularly granted, whenever they have been produced under the great seal of the government; without any recitals or proofs that the prerequisites under which they have been issued have been duly

§ 359. When the patentee wishes to strengthen this evidence, either in the opening of his case, or to rebut any evidence offered by the defendant which may have tended to show that he was not the first inventor, he can only call persons who were in the way of hearing of the invention if it had existed before, to testify that they have not heard of it. The proposition which the plaintiff has to establish is, strictly, a negative; he is to prove that the invention did not exist before; and, therefore, as has been said, he must proceed by exhausting the affirmative instances of it, by calling those persons who might have known of it, if it had existed before, but who never have heard of it; and the more those persons, from their acquaintance with the particular trade or manufacture, were in the way of hearing of or meeting with it, the stronger the evidence will be.[1]

§ 360. Although this evidence is only general and negative, it is not, on that account, without weight. To illustrate its force, as well as its proper office, we may suppose a case, where the defendant had succeeded in showing that some prior inventor had made experiments in the same line as the patentee, and that this evidence goes so far as to show that that person had probably accomplished the same result as the patentee; but the point is still left in doubt, whether he had actually reached and perfected the invention for which the plaintiff has obtained a patent. The rule of law, in such cases, is, that if the prior efforts of some preceding inventor rested in experiment alone, his experiments, however near they may have been carried to the complete production of the thing, will not prevent a subsequent more successful inventor, who has produced the perfect result at which both may have aimed, from obtaining a valid

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observed. In cases of patents, the courts of the United States have gone one step further, and as the patentee is required to make oath that he is the true inventor, before he can obtain a patent, the patent has been deemed *primâ facie* evidence that he has made the invention."

[1] Cornish *v.* Keene, Webs. Pat. Cas. 503; Galloway *v.* Bleaden, Ibid. 526.

patent. The question for the jury will therefore be, in such cases, whether the efforts of the prior inventor rested in experiment alone, without coming to the point of completion, both in the theory and the actual application of the invention. Upon this question, the fact that the invention was never heard of until it was known to have proceeded from the present patentee, is of great weight. If it had been heard of among those persons who make it the business of their lives to know what is going on in the particular trade or art which it concerns, or to know what inventions in all arts or trades are from time to time produced, prior to the time when it was made by the patentee, the presumption would be very strong, that the person who is proved to have made near experiments towards it had actually accomplished the perfect result.[1] Still the evidence would not be conclusive, because the report that such an invention had been made might have arisen from what had been done in the way of experiment alone. But it would be very strong presumptive evidence that the experiments had terminated successfully, if persons who were in the way of hearing of such inventions should testify that they had heard of such an invention having been announced, although they had not seen it. On the other hand, if such persons had not heard of such an invention, the evidence would not show conclusively that the prior experiments rested in experiment alone, but it would have a very strong tendency to establish this conclusion, because there is an irresistible tendency in inventions to become known, as to their results, if not as to their processes, whenever the results are accomplished.[2]

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[1] If such persons had seen the thing, no further inquiry would be necessary, for the proof would be positive that the thing existed before. But the evidence we are here considering relates merely to the fact of such persons having or not heard of the invention, which fact, if shown in the affirmative, of course must be aided by proof of its having been made by somebody, and would not alone be conclusive proof of its actual previous existence.

[2] The case of Galloway *v.* Bleaden, Webs. Pat. Cas. 521, 525, presents a state of facts similar to that which we have supposed in the text. Two

§ 361. There is one other species of evidence, applicable to the issue of novelty, when the question is as to the time when the patentee had completed his invention. It may be necessary for the plaintiff to rebut evidence offered by the defendant as to the invention and use of the same thing by other persons before the date of his patent, and hence it may be important to show the precise time when the invention was completed by the patentee. For this purpose, the patentee may give in evidence his own declarations, as part of the *res gestæ*, describing the nature and objects of the invention, to an extent which has been defined by the Supreme Court of the United States.[1]

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witnesses conversant with subjects of the description of the patented invention, and who devoted themselves to the knowledge of the inventions made from week to week, testified that they had not before heard of such a discovery previous to the issuing of the plaintiff's patent. The court said this was enough to call on the other side to show affirmatively, that the invention was not new, and that it was for the jury to say whether the evidence as to what had been done by the antecedent experiments or efforts of others, in the way in which it ought to be understood, had brought their minds to that conclusion.

[1] "In many cases of inventions, it is hardly possible in any other manner to ascertain the precise time and exact origin of the particular invention. The invention itself is an intellectual process or operation; and, like all other expressions of thought, can in many cases scarcely be made known, except by speech. The invention may be consummated and perfect, and may be susceptible of complete description in words, a month, or even a year before it can be embodied in any visible form, machine, or composition of matter. It might take a year to construct a steamboat, after the inventor had completely mastered all the details of his invention, and had fully explained them to all the various artisans whom he might employ to construct the different parts of the machinery. And yet from those very details and explanations, another ingenious mechanic might be able to construct the whole apparatus, and assume to himself the priority of the invention. The conversations and declarations of a patentee, merely affirming that at some former period he invented that particular machine, might well be objected to. But his conversations and declarations, stating that he had made an invention, and describing its details and explaining its operations, are properly to be deemed an assertion of his right, at that time, as an inventor to the extent of the

§ 362. Sometimes the issue of novelty involves the identity or diversity of the thing patented, compared with something before known or used, on which the defendant relies to defeat the patent. The nature of the evidence and the sources from which it is to be drawn, are the same upon this issue as when the question of identity or diversity arises under the issue respecting an infringement; and the consideration of the principles of evidence on both of these issues may here be postponed until we come to the general discussion of the question of identity.

§ 363. The plaintiff must also offer some evidence of the utility of his invention. The degree of utility, as we have seen, is not material; but the invention must be capable of some use, beneficial to society. This is ordinarily proved by the evidence of persons conversant with the subject, who may be called to say whether the thing invented is or is not capable of the use for which it is designed, or whether it is an improvement upon what had been in use before. But it may also be proved by other testimony, which will show that large orders have been given for the article by the public, or that licenses have been taken for the exercise of the right.

§ 364. The plaintiff, in addition to the *primâ facie* evidence of the novelty of his subject-matter, must also offer some proof of the sufficiency of his specification. In other words, he must show, to use the language of the statute, that his specification is "in such full, clear, and exact terms, as to enable any person, skilled in the art or science to which it appertains, to make, con-

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facts and details which he then makes known; although not of their existence at an antecedent time. In short, such conversations and declarations, coupled with a description of the nature and objects of the invention, are to be deemed a part of the *res gestæ*, and legitimate evidence that the invention was then known to and claimed by him; and thus its origin may be fixed at least as early as that period." The Philadelphia and Trenton Railroad Company *v.* Stimpson, 14 Peters, 462.

struct, compound, or use" the thing patented. This may be apparent to the jury on the face of the specification itself, from its simplicity and the absence of technical terms and descriptions; but where the invention is at all complicated, or terms of art or science are made use of, requiring the exercise of technical knowledge, to determine whether the specification is sufficient, it is at least advisable, if not necessary, for the plaintiff, in opening his case, to give some evidence that his specification can be applied by those to whom the law supposes it to be addressed. If the sufficiency of the specification is disputed, the plaintiff must go into evidence to sustain it. How much of this evidence may properly be reserved for answer to the defendant's case, and how much should be introduced in the plaintiff's opening, must depend on the circumstances of the trial, although it may be stated, as a general rule, that slight evidence of sufficiency is all that is necessary to be offered at first, in order to make it incumbent on the defendant to falsify the specification.[1]

§ 365. The nature and source of the evidence, to show the sufficiency of a specification, present a topic of much interest, under that somewhat difficult branch of the law of evidence which relates to experts. What is the meaning of the statute, when it refers to the ability of persons "skilled in the art or science" to which the invention appertains, "or with which it is most nearly connected," to make, construct, compound, and

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[1] It seems to be the rule in England that the plaintiff must open with some evidence of the sufficiency of his specification, unless the defendant admits that it was tried and succeeded. Turner *v.* Winter, Webs. Pat. Cas. 81; 1 T. R. 602; Cornish *v.* Keene, Webs Pat. Cas. 503. And if a whole class of substances be stated as suitable, the plaintiff must show that each of them will succeed. Bickford *v.* Hewes, Ibid. 218. Under our system of pleading, the same rule should be followed. Although the defendant is obliged to give notice if he intends to rely on the insufficiency of the specification, the plea of not guilty puts the sufficiency of the specification in issue, and the plaintiff must therefore prove it as one of the things necessary to found his action.

use the same? Does it mean to adopt as witnesses those only who have the practical skill of artisans in the art or science, and to make their ability to understand and apply the specification the test of its sufficiency, or does it include that higher class of persons, who, from general scientific knowledge, or from a theoretical acquaintance with the principles of the art or science involved, might be able to teach an artisan or practical workman how to practise the invention? It is apparent that both of these classes of persons may be within the literal meaning of the phrase "skilled in the art or science;" but the question is, whether the law contemplates one only, or both of them, as the proper witnesses to determine the sufficiency of a specification. It seems to me very clear, that the law means to adopt as a general standard of the sufficiency of a specification, the ability of skilful practical workmen to practise the invention from the directions given in the specifications. The standard of acquirement and knowledge may vary with the nature of the subject-matter; but where the invention falls within the province of an art or science, which is practised by a particular class of mechanics, operators, manufacturers, or other workmen, who possess, and whose vocation it is to apply, technical knowledge, in that particular branch of industry, the patent-law refers to their capacity to take the specification and carry out in practice the direction which it contains, without invention or addition of their own.

§ 366. Thus, if the invention be a pump, or of some improvement in pumps, the question will be whether a pump-maker of ordinary skill, could construct one upon the plan given in the specification, from the directions given.[1] If it be a composition of matter, falling within the art of practical chemistry, the question on the specification will be whether its directions are so clear and intelligible, that a practical chemist of ordinary skill could make the compound,

[1] Lamb *v.* Lewis, 1 Mason.

by following out the directions.[1] If it be a process, involving the application of a principle in physics to a particular branch of manufacture, to be carried into effect in a particular manner, the question will be whether the directions if fairly followed out by a competent workman, of the class ordinarily employed to construct an apparatus of that kind, would produce the effect intended.[2] This seems to be the general rule, applicable to a very large proportion of the inventions which become the subjects of patents; and accordingly it may be stated as a general rule that the proper witnesses to determine on the sufficiency of a specification are practical workmen of ordinary skill, in the particular branch of industry to which the patent relates, because it is to them that the specification is supposed to be addressed.[3]

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[1] Ryan *v.* Goodwin, 3 Sumner, 514.

[2] Neilson *v.* Harford, Webs. Pat. Cas. 371.

[3] Gibson *v.* Brand, Webs. Pat. Cas, 629; Bickford *v.* Skewes, Ibid. 219; Arkwright *v.* Nightingale, Ibid. 61; Elliott *v.* Aston, Ibid. 224; Huddart *v.* Grimshaw, Ibid. 87; Morgan *v.* Seaward, Ibid. 174; Neilson *v.* Harford, Ibid. 371. The following instructive charge, given by Alderson B. to the jury in Morgan *v.* Seaward, contains an elaborate illustration of the law on this point of intelligibility. "I will now begin with the specification. It is the duty of a party who takes out a patent to specify what his invention really is, and although it is the bounden duty of a jury to protect him in the fair exercise of his patent right, it is of great importance to the public, and by law it is absolutely necessary, that the patentee should state in his specification, not only the nature of his invention, but how that invention may be carried into effect. Unless he be required to do that, monopolies would be given for fourteen years to persons who would not on their part do what in justice and in law they ought to do, state fairly to the public what their invention is, in order that other persons may know what is the prohibited ground, and in order that the public may be made acquainted with the means by which the invention is to be carried into effect. That is the fair premium which the patentee pays for the monopoly he receives. The question is, whether Mr. Galloway has in the specification, and which is accompanied by a drawing which you ought to take as part of the specification, described with sufficient clearness and distinctness the nature of his invention, and the mode by which it is to be carried into effect. He has described two inventions, and if either of those inventions is sufficiently specified, the patent fails; for if a person runs the hazard of putting two inventions into one patent, he cannot hold his patent, unless each can be supported as a separate

§ 367. At the same time, there may be another class of wit-

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patent. In order to support each, the invention must be useful, and must be described in the specification in such a manner as to lead people clearly to know what the invention is, and how it is to be carried into effect. That doctrine must be applied to each of the two inventions contained in this patent, that is, to the invention of the steam-engine, and the invention of the machinery for propelling vessels.

To begin therefore with the steam-engine. — Has Mr. Galloway sufficiently described it so as to enable any one to know what he has invented, and so as to enable a workman of competent skill to carry the invention into effect? Mr. Justice Buller, in the case of the King *v.* Arkwright, lays down as the criterion that a man to entitle himself to the benefit of a patent of monopoly must disclose his secret and specify his invention in such a way that others of the same trade, who are artists, may be taught to do the thing for which the patent is granted, by following the directions of the specification, without any new invention or addition of their own. That is reasonable and proper, for people in trade ought to be told the manner in which the thing may be done in respect of which the patent is granted. — How? Not by themselves becoming inventors of a method of carrying it into effect, but by following the specification, without making a new invention, or making any addition to the specification. If the invention can only be carried into effect by persons setting themselves a problem to solve, then they who solve the problem become the inventors of the method of solving it, and he who leaves persons to carry out his invention by means of that application of their understanding, does not teach them in his specification that which in order to entitle him to maintain his patent he should teach them, the way of doing the thing, but sets them a problem, which being suggested to persons of skill, they may be able to solve. That is not the way in which a specification ought to be framed. It ought to be framed so as not to call on a person to have recourse to more than those ordinary means of knowledge (not invention) which a workman of competent skill in his art and trade may be presumed to have. You may call upon him to exercise all the actual existing knowledge common to the trade, but you cannot call upon him to exercise any thing more. You have no right to call upon him to tax his ingenuity or invention. Those are the criteria by which you ought to be governed, and you ought to decide this question according to those criteria. You are to apply those criteria to the case now under consideration, and you should apply them without prejudice, either one way or the other, for it is a fair observation to make, that both parties here stand, so far as this objection is concerned, on a footing of perfect equality. The public, on the one hand, have a right to expect and require that the specification shall be fair, honest, open, and sufficient; and, on the other hand, the

nesses, of much higher character, competent to be examined on

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patentee should not be tripped up by captious objections which do not go to the merits of the specification. Now, applying those criteria to the evidence in the cause, if you shall think that this invention has been so specified that any competent engineer, having the ordinary knowledge which competent engineers possess, could carry it into effect by the application of his skill, *and the use of his previous knowledge, without any inventions on his* part, and that he could do it in the manner described by the specification, and from the information disclosed in the specification, then the specification would be sufficient. If, on the other hand, you think that engineers of ordinary and competent skill would have to set themselves a problem to solve, and would have to solve that problem before they could do it, then the specification would be bad.

" Further, if a patentee is acquainted with any particular mode by which his invention may be most conveniently carried into effect, he ought to state it in his specification. That was laid down in a case before Lord Mansfield. There the question arose on a patent for steel trusses. It appeared that the patentee, in some parts of his process, used tallow to facilitate the invention for which he had obtained a patent, and in his specification he made no mention of the use of the tallow. The court held the specification to be bad, because, they said, you ought not to put people to find out that tallow is useful in carrying into effect the invention of steel trusses. You ought to tell the public so, if that is the best mode of doing it, for you are bound to make a *bonâ fide* full and candid disclosure. So again in the case of the malt. That was a patent for drying malt, and one of the objections taken was that the patentee did not state in his specification the degree of heat to which the malt should be exposed. The argument there was this. They said, it appeared that the specification was not sufficient, inasmuch as it did not describe the extent of heat to which the malt should be exposed, for it only said, 'the proper degree of heat and time of exposure will be easily learned by experience, the color of the internal part of the prepared grain affording the best criterion.' Surely, there it would have been competent to the patentee to say, any person of ordinary skill, in such a business, would be able to judge what color the malt ought to be, and that, by experiment, he would learn what degree of temperature was exhibited at the time when that proper degree of color was obtained; therefore the plaintiff contended that there was enough stated in the specification to enable the public to carry the invention into effect, and that the patent ought to be supported, because skilful maltsters and skilful dryers of malt would easily know where to stop, and what degree of heat was requisite for the purpose. There is no doubt that when a man was told that a certain effect might be produced upon the malt by shaking it and subjecting it to a certain degree of heat, his mind

this point. These are persons who possess a thorough scientific

would be set on float; he would be at work upon it to ascertain what that degree of heat should be, and he would probably find it out. But that is not enough. The specification of a patent must not merely suggest something that will set the mind of an ingenious man at work, but it must actually and plainly set forth what the invention is, and how it is to be carried into effect, so as to save a party the trouble of making experiments and trials. The court in that case said, that a specification that casts upon the public the expense and labor of experiments and trials, is undoubtedly bad. Here, in this case, the defendants take that line of argument; they say that experiments and trials are necessary. If it be said that all these matters will be well or easily known to a person of competent skill (and to such only the patentee may be allowed to address himself) then the invention will not in reality have given any useful or valuable information to the public.

"Now, let us apply the principle of this case to the present, and see whether or not the patentee here has given that full information by the specification and drawing, which, being addressed to persons of competent skill and knowledge, would enable them, from that specification and drawing, to carry the invention into effect. On that subject there is, undoubtedly, contradictory evidence, but you see a specification is addressed to all the world, and therefore all the world, at least those possessed of a competent skill, ought to be able to construct the machine by following that specification. It is not fair to you or to me, if we happen to be less inventive than our neighbors, that we should be prevented from constructing these machines, by reason of the specification not giving a clear exposition of the way in which it is to be done. In the case of the steam-engine, there was put in on the part of the defendants a model, made, as it was said, according to the specification, which model would not work. The model was a copy of the drawing, and would not work, because one part happened to be a little too small, whereas, if it had been a little larger, it would have worked. Now a workman, of ordinary skill, when told to put two things together, so that they should move, would of course, by the ordinary knowledge and skill he possesses, make them of sufficient size to move. There he would have to bring to his assistance his knowledge that the size of the parts is material to the working of the machine. That is within the ordinary knowledge of every workman. He says, 'I see this will not work because it is too small,' and then he makes it a little larger, and finds it will work: what is required is, that the specification should be such as to enable a workman of ordinary skill to make the machine; with respect to that, therefore, I do not apprehend you will feel much difficulty, but with respect to the other there is a good deal more difficulty. I will not sum up the evidence upon the subject of the steam-engine, but I will confine myself to the second invention, and

knowledge, of a theoretical nature, of the principles of the art or

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see whether that can be carried into effect by means of the specification and the drawings, for it is to that question that the whole is directed. That invention is in two parts: first, he says, it is an improvement on paddle-wheels for propelling vessels, whereby the float-boards or paddles are made to enter and come out of the water at positions the best adapted, as far as experiments have determined the angle, for giving full effect to the power applied. He says, as far as experiments have determined the angle. That clearly speaks of an invention for enabling a party to use paddle-wheels for propelling vessels, which may be adjusted in such a way as that they may enter and come out of the water in angles the best adapted to give effect to the power of the engine, that is to say, at the angle *a*, if that shall be the best position for giving full effect to the power of the engine, or at the angle *b*, if that shall hereafter, by experiment, be determined to be the proper angle. It appears, from his statement here, that the proper angle was a matter of considerable doubt at that time; and, therefore, he does not profess to set down an individual angle as the best, which appears to have been one of the ideas of the defendant, as to the effect of the plaintiff's specification. But he says, I will give you a method of enabling the paddle-wheels to enter and come out of the water, with the position the best adapted for giving full effect to the power of the engine. Then, at the end of the specification, after having described the manner in which it is to be done, he says, that his claim is 'for the mode hereinbefore described of giving the required angle to the paddles,' (that is, any angle which may be required by the person ordering the machinery,) 'by means of the rods *g*, *h*, *i*, *j*, and *k*, the bent stems marked *f*, the disc *a*, and the crank *b*.' Now, I do not think that means he is to give you a machine, the angle of which may now be *a*, and now *b*, but that if you wish to have a machine, the paddles of which shall enter at angle *a*, which you tell him, and go out at angle *b*, which you tell him, he ought to be able to construct a machine which shall answer to your order. That I take to be what the inventor says he has enabled the public to do by means of his specification and plan. He then describes the invention. In fig. 4, you have the shape of the stem, and a particular angle is mentioned, but it is obvious that that is not an angle to which the parties are necessarily to be confined. Then he says, '*g*, *h*, *i*, *j*, and *k*, are connecting rods attached at one of their ends by pins or bolts, *r*, to the bent stems, *f*, of the float-boards, and the other ends of all these rods, excepting *g*, are attached to the disc, *a*, by pins or bolts, *s*, as shown in fig. 5.' The only observation is, that he gives no dimensions; he fixes no points either for the centre of the eccentric, or for the crank to which the eccentric centre is attached; therefore, if those can only be ascertained by experiments subsequently to be made, then the specification is bad. The whole, in some

science to which the patent relates, but who do not, as an habitual

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degree, turns upon the length of the rods, and the position of the centre of the eccentric. The principle upon which these parties proceed, and upon which all the inventions in that respect proceed, is, that the wheel, with its spokes, to which the floats are attached, turns round on an axis, and the floats are made to turn by means of an eccentric, and, therefore, the floats bend as the wheel revolves, and they bend, in a particular manner, according as the floats are disposed, and according to the position of the centre of the eccentric, by which they are regulated. They are regulated by means of a fixed bar, which is attached to the centre of the eccentric disc. The others are movable boards, which are attached apparently to the circumference of that same disc, and the whole is made to revolve by the fixed bar being attached to a fixed point of the wheel itself, and, therefore, the revolution of the wheel forcing that fixed point round, turns round the eccentric disc, and with it changes continually the position of all those rods which are affixed to the circumference of that disc, and, according to their being on one or the other side of that disc, they operate on the respective float-boards to which they are attached. All that turns upon the position of the eccentric axis, and the length of the respective rods operating through the medium of this centre upon the respective float-boards; now, the question is, whether, in the absence of any statement, as to the dimensions of these different parts, and of any directions for finding the centre of the eccentric, you think the specification is sufficient or not, and that must be determined by the evidence which has been given by the witnesses on the one side and on the other.

"Now, gentlemen, you cannot treat the actual picture which is given in the drawing as any guide to the particular angle, or to the particular position of the eccentric; and for this simple reason. If that were the criterion, then the substance of the invention would be the particular angle contained in the particular drawing, and, in order to show an infringement, they ought to have shown that Mr. Seaward's wheel entered the water at the same angle as the angle described by the drawing, and, therefore, in that case, you would be bound to find the first issue for the defendant, namely, that there was no infringement. If, however, you treat the picture or the drawing as only an illustration of the invention, and not as confining the invention to the particular angle there described, then you ought to find in the specification some directions, which should enable you to construct the machine in a new form, or you ought to be satisfied that, without any instructions, a workman of ordinary and competent skill, and knowledge, would be able to do it. Now, I do not think that Mr. Carpmael gives any evidence to that point; but Mr. Brunel says, 'I have read the specification, and I think I could construct by it a machine at any required angle without difficulty.' You see he says, 'I think I could construct by it a machine at any required angle with-

occupation, devote themselves to the application of those principles

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out difficulty : ' but whether Mr. Brunel could do it or not, is not the point. I dare say, Mr. Brunel, the inventor of the block machinery, could invent any thing of this sort, the moment it was suggested to him, but that is not the criterion. . The question is, whether a man of ordinary knowledge and skill, bringing that ordinary knowledge and skill to bear upon the subject, would be able to do it.

"Then the evidence of Mr. Park is much more material. He says, 'I could, without any difficulty, make the machine so that the paddles could enter the water at any angle.' He prepared the models which have been used. Now, the criterion is, whether, at the time when the specification was introduced to the world, Mr. Park would have been able to construct the machine with his ordinary knowledge and skill, without the peculiar knowledge he has since obtained upon the subject, from being employed to make the models for Mr. Morgan, because it would not be at all fair to allow your verdict to be influenced by knowledge so acquired ; but he says, with his ordinary knowledge and skill, he could, without difficulty, construct a wheel, so that the paddles should enter the water at any angle. He says, if the diameter of the wheel is given, which it is fair should be given, and the immersion of the float, and that is also fair to be given, he could do it. Those are reasonable data for him to require, and if with his ordinary skill and knowledge, and without that peculiar knowledge which he has obtained, in consequence of his connection with the plaintiffs, and with this cause, he could do it, that would be evidence on which you would he entitled to place reliance. Then he tells you how he could do it : now, I do think it would have been a vast deal better if the specification had given us the same information, for that is what a specification ought to do.

"The specification ought to contain a full description of the way in which it is to be done. The question really is, whether, upon the whole evidence, you are of opinion that the specification does fairly and fully and properly give to the public that information which the public are entitled to receive, that is to say, whether it tells them, without having recourse to experiments, how to do it, or whether it even tells them what is the course their experiments ought to take — to what point their examinations and experiments should be directed. He says, he could do it with the skill he possesses ; and he has described the manner in which he proposes to do it. He says, 'I have seen this drawing;' then he produces a drawing, and he says, 'this represents my plan of drawing it. An engineer of competent skill would have no difficulty in doing 't.' His doing it himself, I do not consider so material, but he says an engineer of competent skill would have no difficulty in doing it. That is material.

"Then, when that drawing was shown, some of the gentlemen appearing

in the practical exercise of that art, science, or manufacture. Such

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on behalf of the defendants drew an angle upon it as the angle of entering, and asked him how that could be done. No doubt his principle would enable him to work out any angle, but there are a set of angles which would cause the centre of the eccentric to go beyond the wheel itself, which, therefore, it is impossible to carry into effect, but those angles are such as would not be required in ordinary practice by any persons. You should discard, on both sides, all exaggerated cases, and look to the substance of the thing. If you think, in substance, that the information, really communicated, would be enough in all ordinary cases, or in such cases as are likely to occur, then that would do; but if it is not a clear statement, and if it does not give such information as will render it unnecessary for parties to make experiments, then the specification would, in that respect, be insufficient. It is most important that patentees should be taught that they are bound to set out fully and fairly what their invention is, for, suppose a person were to make an invention, and get a right of making it for fourteen years, to the exclusion of all other persons, it would be a very great hardship upon the public, if he were to be allowed to state his specification in such a way, that at the expiration of the term of his patent, he might laugh at the public, and say, I have had the benefit of my patent for fourteen years, but you, the public, shall not now carry my invention into effect, for I have not shown you how it is to be done. I have got my secret, and I will keep it.

"Mr. George Cottam says, 'it is a common problem to find a centre from three given points, and a person of ordinary engineering skill ought to be able to do that.' The question is, whether it ought not to be suggested to him by the specification. that that is the problem to be solved. Then Mr. Curtis says, 'I have made wheels on this plan.' You see he made the two wheels which were sent to the Venice and Trieste Company, but those were made under the direction of Mr. Galloway, the inventor. Now, it somewhat detracts from the weight due to his testimony, not as to his respectability, but as to the value of his evidence to you, that he had received the verbal instructions of Mr. Galloway. It may be, that he could do it, because of his practice under Mr. Galloway; and it must be recollected that people in other places would not have that advantage. He says, he would not have any difficulty in doing it; and he says, 'I should not consider my foreman a competent workman unless he were able to make the wheel from the specification and drawings.' He says, 'I could alter the angle by altering the cranks.' The question is not, whether he could do that, but whether he could alter the angle to a particular angle by altering the cranks in a particular way, that is, whether, having the angle given to him, he could make the alteration that was desired. Then, Mr. Joseph Clement says, he is a mechanic, and did the work of Mr. Babbage's calculating machine; that he

persons may, without doubt, be examined as to the sufficiency

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has seen the model of the steam-engine and paddle-wheels. He speaks of the similarity of the plaintiffs' and defendants' wheels, and says, 'I could make the machine from the specification and drawing. The float ought to enter the water at a tangent to the epicycloid.' That is only his opinion as to the most convenient angle. The real motion of the boat is this. The wheel keeps turning round and round on its own axis; during that time the boat has a progressive motion. The wheel, therefore, has a double motion; therefore every point of the wheel does not move in a circle, but in a cycloid, that being the curve described by the rolling of a circle on a flat surface. He says, it should enter at a tangent, that is, that the angle should be such that it will enter the water perpendicularly, in consequence of the motion of the boat, and of the point of the wheel. He says, in like manner, it ought to go up. That is, probably, a very correct view of the case. He says, 'I should have no difficulty in constructing a float to enter at any angle ordinarily required. A man, properly instructed in mechanics, would have no difficulty in doing it.' That is his evidence, which it is material for you to consider; and he is a mechanic himself.

"Then, Henry Mornay, a young gentleman in Mr. Morgan's employment, where he has been apparently studying the construction of engines, speaks of a circumstance which does appear to me to be material. He says, Mr. Morgan, in practice, makes his rods of different lengths. He must necessarily do so, in order that the floats may follow at the same angle as that at which the driving float enters the water. The problem which Mr. Park solved, is a problem applying to three floats only; but it appears that the other floats will not follow in the same order, unless some adjustment of the rods is made. Now, suppose it was to be desired that the floats should all enter the water at the given or required angle, if one should go in at one angle, and one at another, the operation of the machine would not be uniform; and the specification means that the party constructing a wheel, should be able to make a wheel, the floats of which shall all enter at the same angle, and all go out at the same angle. Now, in order in practice to carry that into effect, if there are more than three floats, something more than Mr. Park's problem would be required; and Mr. Mornay says, actually, that Mr. Morgan, in practice, makes his rods of different lengths, and he must necessarily do that, in order that the floats may follow at the same angle as the driving float enters the water. If so, he should have said in his specification, 'I make my rods of different lengths, in order that the rest of my floats may enter at the same angle; and the way to do that is so and so.' Or, he might have said, 'it may be determined so and so.' But the specification is totally silent on the subject; therefore, a person reading the specification, would never dream that the other floats must be governed by rods

of a specification; but the question which should be propounded

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of unequal length; and least of all could he ascertain what their lengths should be, until he had made experiments. Therefore, it is contended that the specification does not state, as it should have stated, the proper manner of doing it. He says, if they are made of equal lengths, though the governing rod would be vertical at the time of entering, and three would be so when they arrived at the same spot, by reason of the operation Mr. Park suggests, yet the fourth would not come vertical at the proper point, nor would the fifth, sixth, or seventh. Then they would not accomplish that advantage which professes to be acquired. The patentee ought to state in his specification the precise way of doing it. If it cannot completely be done by following the specification, then a person will not infringe the patent by doing it. If this were an infringement, it would be an infringement to do that perfectly, which, according to the specification, requires something else to be done to make it perfect. If that be correct, you would prevent a man from having a perfect engine. He says, practically speaking, the difference in the length of the rods would not be very material, the difference being small. But the whole question is small, therefore it ought to have been specified; and if it could not be ascertained fully, it should have been so stated. Now, this is the part to which I was referring, when, in the preliminary observations I addressed to you, I cited the case before Lord Mansfield, on the subject of the introduction of tallow, to enable the machine to work more smoothly. There, it was held, that the use of the tallow ought to have been stated in the specification. This small adjustment of these different lengths may have been made for the purpose of making the machine work more smoothly; if so, it is just as much necessary that it should be so stated in the specification, as it was that the tallow should be mentioned. The true criterion is this, — has the specification substantially complied with that which the public has a right to require? Has the patentee communicated to the public the manner of carrying his invention into effect? If he has, and if he has given to the public all the knowledge he had himself, he has done that which he ought to have done, and which the public has a right to require from him.

"I will now read the defendant's evidence, and you will see, whether, upon the whole, there is evidence before you, on which you think you can come to any reasonable conclusion.

"Now, first of all, Mr. Donkin, a man of considerable experience, is called; but before I go to his evidence, I will remark, that I have always found that there is a great deal of contradiction in questions of this description; but that is not to be attributed, in the least degree, to corruption, or to any intention to misrepresent or mislead — people's opinions vary. They come to state to you not matters of fact, but matters of opinion, and they tell

to them, in cases where there is a recognized class of practical

you, conscientiously, what their opinion really is. You may have a great difference of opinion, among scientific men, on a question relating to science; but though, by their evidence, they contradict one another, they are not influenced by a corrupt desire to misrepresent.

"Now, Mr. Donkin says, 'On first reading the specification, I thought there was a defect in its not explaining the mode of obtaining the required angle. In my judgment, a workman of ordinary skill would not be able to find out any mode of obtaining the required angle.' He says, a geometrician might discover the mode of adjusting the three angles, the angle of immersion, the vertical angle, and the angle of emersion; but, in order to discover the mode by which all the paddles may enter at the same angle, another discovery must be made. He says, it requires to be ascertained, by experiment or diagram, whether the adjustment is to be made by altering the bent stem, or by varying the length of the rods, and you have nothing but the drawing to guide you in that respect. He says, he must first ascertain whether he is to produce the effect by altering the centre, or by altering the bent stem, or varying the lengths of the movable rods. What are those but experiments to ascertain how the thing should be done, all of which he ought to have been saved, by its being stated in the specification how to do it. However, that is his evidence; he says, the angle must depend on the dimensions of the several parts of the wheel. Then he goes on to the other parts of the case, and, on his cross-examination, he says, 'I think a competent workman would be able to do it if he made the previous discovery; but he would not do it unless a careful investigation was gone into.' He says, 'few ordinary workmen would be able to get the desired angle; I think my foreman would — I think a person moderately acquainted with geometry might do it, but he must find it out — he could sit down and determine it. If he possessed proper information, he ought to be able to do it. An engineer properly skilled in geometry, ought to be able to find out how the angle was to be determined. If he sat down and referred to his general knowledge, he would find it out.' Now, the criterion is not, whether he could find it out or not, but, whether he could do it by means of the information contained in this specification and drawing, calling in aid his general knowledge, and those mechanical means with which he may reasonably be expected to be familiar; but if he is to sit down and consider how it is to be done, that is not sufficient. You will judge, whether, or not, the evidence of this witness satisfies you on these points, and whether it makes out the proposition for which the defendants contend.

"Then, Mr. Brunton says, 'I think a workman of competent skill could not construct a machine, so as to have the floats enter at any particular angle, and leave at a particular angle.' He says, if the required angle was

workmen, who would be called upon to apply the directions of

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different from the drawing, it would be an exceedingly difficult thing, and he is not prepared to say how he could do it. Then, Mr. Hawkins says, 'I do not think a workman of ordinary skill could, from the plan and specification, make a wheel that should enter and quit the water at a different angle from that given in the drawing, unless he possessed considerable ingenuity for inventing the method of doing it.'

"Then, Mr. Peter Barlow says, 'There are not, I think, sufficient data to adjust the angle.' He says, if the length of the stems was given, the difficulty would be very great, but it would have been a guide, and it ought to have been explained. That appears to me to be a very good common sense observation. Then, Mr. John Donkin says, 'I think an ordinary workman would find considerable difficulty in altering a paddle-wheel to suit a particular angle, and I doubt whether he could do it.' On his cross-examination, he says, 'it requires more than a common knowledge of geometry; I think a man moderately acquainted with geometry might do it, but he would have to make experiments, and his first experiments would fail. A skilful engineer would have less difficulty in it, but he ought to be able to find it out.' Then, Mr. Bramah says, 'I think I could discover how to do it.' He has been an engineer many years, and he says, 'I think I could discover it, but I do not know at present how to do it. Yesterday, I attended to the evidence, and this morning I tried to find out how it was to be done, but I could not.' Supposing Mr. Bramah had to make a machine of this kind, is he to sit down and invent a mode of doing it, or ought he not to have such information afforded as would enable him to do it at once by means of the specification? Then, Mr. Francis Bramah says, 'I have examined the specification: I could not make a machine from the specification, the floats of which should enter and leave the water at any required angle. Till I came into court, yesterday, I presumed that the angle given in the drawing was the best angle, that is, that the specification had not only stated how to do it, but had described the best angle.' If so, it would be a specification only for that particular angle. He says, 'I can go as far as I was told, yesterday, but no farther.'

"Now, gentlemen, I have gone through the evidence on both sides, on this point, and the question, upon this part of the case, revolves itself into this: Do the witnesses, on the plaintiff's side, satisfy you that the patentee has, in his specification, given to the public the means of making a machine which shall enter and leave the water at any angle that may be ordered: that is, if a man ordered a machine at an angle likely to be required for entering and going out, and to be vertical at the bottom, could an ordinary workman, with competent skill, execute that order by following the directions given in this specification? If you think he could, then the specifica-

the specification, is, whether a person of that class, of ordinary skill, could practise the invention from these directions. There does not seem to be any authority, which goes the length of saying that a specification in cases of this kind, would be good, if every competent artisan who might be called were to testify that he could not apply the directions successfully, provided a scientific witness, of the other class, were to testify that he could teach or demonstrate to an artisan how to apply them;[1]

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tion would be sufficient. If, on the other hand, you think he would not be able to execute the order, unless he sat down and taxed his invention to find out a method of doing that which has not been sufficiently described in the specification, then the specification would be bad. If you think the specification good, then you ought to find for the plaintiffs upon that issue; if you think the specification bad, then you ought to find for the defendants."

[1] In Allen *v.* Blunt, 3 Story's R. 717, 748, Mr. Justice Story made use of the following language: "As to the relative weight of the evidence of persons practically engaged in the trade, employment, or business of the particular branch of mechanics to which the patent right applies, and the evidence of persons who, although not practical artisans, are thoroughly conversant with the subject of mechanics as a science. It appears to me, that the Patent Acts look to both classes of persons, not only as competent, but as peculiarly appropriate witnesses, but for different purposes. Two important points are necessary to support the claim to an invention: First, that it should be substantially new, as, for example, if it be a piece of mechanism, that it should be substantially new in its structure or mode of operation. Secondly, that the specification should express the mode of constructing, compounding, and using the same in such full, clear, and exact terms, 'as to enable any person skilled in the art or science, to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same.' Now, for the latter purpose, a mere artisan skilled in the art with which it is connected, may, in many cases, be an important and satisfactory witness. If, as a mere artisan, he can, from the description in the specification, so make, construct, compound, and use the same, it would be very cogent evidence of the sufficiency of the specification. Still, it is obvious, that, although a mere artisan, who had no scientific knowledge on the subject, and who was unacquainted with the various mechanical or chemical equivalents employed in such cases, might not be able to make and compound the thing patented, from the specification; yet, a person who was skilled in the very science on which it depended, and with the mechanical and chemical powers and equivalents, might be able to teach and demonstrate to an artisan, how it was to be made or constructed, or compounded or used. *A fortiori*

although proof may be offered of the opinions of scientific witnesses, that a particular means which might be used to carry out the general directions of a specification, would succeed, without showing that that means had actually been tried and had succeeded.[1]

§ 368. Whether there is a class of inventions, addressed so entirely to scientific witnesses, as to render their knowledge and skill requisite, in the practical application of the directions, so

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he would be enabled so to do, if he combined practical skill with a thorough knowledge of the scientific principles on which it depended." It is not quite clear, upon this passage, whether the learned judge did or did not mean to intimate, that a specification would be good, if a scientific witness could teach an artisan how to make, compound, or use the thing patented, although the artisan could not practise the invention without such aid. The sense in which he seems to oppose the word 'artisan' to that class of persons who are not practical artisans, but who are 'thoroughly conversant with the subject of mechanics as a science,' or are 'skilled in the very science on which the invention depends,' would seem to imply that an obscurity or other defect, in a specification, which would embarass an artisan, may be cured by a scientific person, whose superior knowledge of the principles of the science, might be used to teach the workman, from the specification; if so, this is not the standard which the same learned judge adopted on other occasions. In Lowell *v.* Lewis, 1 Mas. 190, he instructed the jury, that the question was, whether the specification was so clear and full, that *a pump-maker of ordinary skill*, could, from the terms of the specification, construct a pump on the plan described. Perhaps, however, in the more recent case, he intended only to draw a distinction between mere mechanics, or laborers, in a particular art, manufacture, or trade, and persons conversant with the science on which it depends; and to say that the latter are competent, and often the most satisfactory witnesses, which is certainly obvious. It is scarcely to be presumed, that he meant to say, that where the description in a patent is of a thing, which a particular class of mechanics would be employed to make, the specification would be sufficient, although it could not be carried out by a workman of that class, having ordinary skill, provided it could be understood by a 'person thoroughly conversant with the subject of mechanics as a science.' This, as a general proposition, would confine the practice of many inventions, after the patent had expired, to the latter class of persons, which the patent law does not intend.

[1] Neilson *v.* Harford, Webs. Pat. Cas. 295, 315, 316.

that there cannot be said to be any recognized class of artisans, to whose capacity the directions can be referred, is another question. This must depend on the nature of the invention.

§ 369. Before it can be determined, in any case, what class of persons are to be taken as those, whose ability to apply the directions furnishes the standard of the sufficiency of the specification, it must first be ascertained to what class of persons the specification is presumed to be addressed, as being those who are to carry out the directions. If the inquiry arose after the patent had expired, this class of persons would, in most cases, be readily ascertained, by observing what persons applied themselves to the practice of the invention. But it actually arises, before the patent has expired, and before its dedication to the public enables us to see what persons will undertake to practise the invention. That state of things must, therefore, be anticipated, so far as to ascertain what persons will undertake practically to carry out the directions of the patent, for the purpose for which the invention is designed. The standard, therefore, will vary greatly, according to the nature of the invention. In some cases, the persons who will undertake to practise it will be very numerous, in others, very limited, in point of numbers. In some cases, the qualifications will be very moderate, in others, a very high state of accomplishment, skill, and knowledge, will be requisite. The nature and objects of the invention must be resorted to, to see to what persons the specification is to be presumed to be addressed. If it be a machine destined to a particular use, the workmen whose vocation it is to make similar machines, for similar purposes, will be the persons who would be called upon to make the machine after the patent has expired. If it be a composition of matter, involving the knowledge of practical chemists, such persons will attempt to practise the invention, when they are at liberty to do so. If it be a manufacture of an improved character, the persons whose business it has been to make the old article, will be the persons who will make the new one. In all these and similar

cases, where there is a class of workmen, who are habituated to the practical exercise of the art or science under which the patented invention falls, the specification is to be presumed to be addressed to them; and, although scientific witnesses may be examined, as to the clearness and fulness of the specification, its sufficiency must be referred to the ability of competent practical workmen, of ordinary skill, to understand and apply it. This limitation of the evidence follows, necessarily, from the principle that the specification cannot be supported by the fresh invention and correction of a scientific person. The ordinary knowledge and skill of practical workmen being the standard, where the specification is for the benefit of a particular trade, the evidence cannot be carried so far as to include the degree of skill and knowledge possessed by a scientific person, who could, on a mere hint, invent the thing proposed to be accomplished; although such a witness may be asked, whether a competent workman could attain the object of the patent, by following out the directions.[1]

§ 370. But if the invention be of a character entirely novel, embodying an effect never before produced, and which it is not within the province of any particular class of workmen to produce, but which it belongs rather to the province of men possessed of some science to apply, by directing the labors of common artisans, upon principles which such artisans do not commonly understand or undertake to use, then the specification may be presumed to be addressed to men capable of applying those principles, and not to mere artisans, who have previously been employed in the construction of things of the same class which it is the object of the invention to supersede. Thus, in the case of an invention, which consisted in an improvement on paddle-wheels for propelling vessels, by a mode of constructing them, so that the floats might enter and quit the water at any required angle,

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[1] Morgan *v.* Seaward, Webs. Pat. Cas. 174; Neilson *v.* Harford, Ibid. 371; The Househill Co. *v.* Neilson, Ibid. 692.

the specification would be addressed to engineers capable of determining what angle was required, and it ought to furnish the rules by which such persons could ascertain the angle, and the mechanical means by which it could be applied in practice.[1] The understanding of such a specification would be somewhat above the range of acquirements belonging to mechanics employed in the manual labor of constructing the machinery, that is to say, the specification would be addressed to competent engineers, of ordinary skill in that profession.[2]

§ 371. But it should be remembered, that whenever, in a case of this kind, as in all other cases, the persons to whom the specification is to be presumed to be addressed, have been ascertained, a rule becomes applicable, which defines the nature and scope of the evidence that may be offered, to explain the specification. This rule is, that the patentee must not, in framing his specification, call upon the persons to whom it is addressed to exercise more than the actual existing knowledge common to their trade or profession. He has a right to exhaust this knowledge; but if, in order to apply his directions, the members of the trade or profession are required to tax their ingenuity or invention, so that, beyond the exercise of ordinary and competent skill, they would have to solve a problem, or supply something, in the process, by the exercise of the inventive faculty; the specification would be bad.[3]

§ 372. II. *As to the Infringement.* Upon the question of infringement, the point to be determined is, whether the thing made or used by the defendant is, in the sense of the patent law, identical with the invention of the patentee. This is the same question as that which arises on the issues of novelty, when it is necessary to determine whether the invention of the

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[1] Morgan *v.* Seaward, Webs. Pat. Cas. 170; *Ante*, p. 409 *et seq.*

[2] Ibid.

[3] Ibid.

patentee is the same as some former thing, or different, and therefore entitled to be regarded as a novelty. We may, therefore, here consider the principles of evidence applicable to the inquiry, whether two things are identical in the sense of the patent law.

§ 373. It is obvious that there may be two kinds of evidence applicable to this issue, both of which may be drawn from experts. Whether one thing is like another, is a matter of judgment, to be determined on the evidence of our own senses, or the senses of others. If we rely on the senses of others, the sole testimony which they can bear, is, either as to the matters of fact which constitute the precise differences or resemblances between the two things, or as to matter of opinion, by which they infer that these differences or resemblances do, or do not affect the question of the substantial identity of the two things. Both of these kinds of evidence, however, run so nearly into each other, and the boundaries between them are often so shadowy, that it is sometimes difficult to draw the line between fact and opinion. The actual differences or resemblances between two things are *primâ facie* matters of fact, to be observed by the senses; but, with the act of observing these differences or resemblances, we blend the process of reasoning, by which we determine, for our own satisfaction, what is a real, and what only an apparent difference or resemblance; what constitutes a difference or resemblance, in point of principle; and the result of this process, expressed in the conclusion, that the two things are, or are not identical, is matter of opinion. Between these two branches of evidence, it is exceedingly difficult to draw the line, so as to define the true office of an expert, and to admit all proper evidence of facts and opinions, without leaving to the witness the whole determination of the issue.[1]

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[1] In Dixon *v.* Moyer, 4 Wash. 68, 71, Mr. Justice Washington said: "In actions of this kind, persons acquainted with the particular art to which the controversy relates are usually examined for the purpose of pointing out and

§ 374. At the same time, it is certain that a boundary exists somewhere. The question whether two things are identical, in the sense of the patent law, is a mixed question of law and fact; and when it is submitted to a jury, it is for the court to instruct them, after the actual differences or resemblances are ascertained, what constitutes, in point of law, a difference or identity.[1] There is, therefore, a most important function to be discharged, if one may so say, by the law itself; for it has to determine, upon all the facts open to the observation of the senses, whether guided by the superior facility for observation enjoyed by experts, or not so assisted, whether, in the sense of the law, there is an identity or a difference. This function is always in danger of being encroached upon, by a loose mode of receiving the testimony of experts, by whom the whole question is often in reality left to be decided.

§ 375. The testimony of persons skilled in the particular subject is undoubtedly admissible, for two purposes; *first*, to point out and explain the points of actual resemblance or difference; *secondly*, to state, as matter of opinion, whether these resemblances or differences are material; whether they are important or unimportant; whether the changes introduced are merely the substitution of one mechanical or chemical equivalent for another, or whether they constitute a real change of structure or composition, affecting the substance of the invention. But when these facts and opinions have been ascertained, the judgment of the jury is to be exercised, upon the whole of the evidence, under the instructions of the court as to what

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explaining to the jury the points of resemblance, or of difference, between the thing patented, and that which is the alleged cause of the controversy; and the opinions of such witnesses, in relation to the materiality of apparent differences, are always entitled to great respect. But, after all, the jury must judge for themselves, as well upon the information so given to them, as upon their own view, where the articles, or models of them, are brought into court."

[1] Barrett *v.* Hall, 1 Mas. 447, 470, 471, 472.

constitutes such a change as will in point of law amount to a fresh invention and therefore will not be an infringement.[1]

§ 376. The duty of giving this instruction should not be surrendered by the court. A scientific witness may be asked, for instance, whether in his opinion, a particular machine is substantially new in its structure, or mode of operation, or whether it is substantially the same thing as another, with only apparent differences of form and structure. But when the differences or resemblances have been pointed out, and when the view that science takes of their relative importance has been ascertained; when the fact appears of whether a particular change is or is not regarded by mechanicians as the substitution of one mechanical equivalent for another, the court must instruct the jury, whether the particular change amounts, in point of law, to a change of what is commonly called the principle of the machine. This is a question wholly aside from the function of a witness. The most skilful and scientific mechanician in the world can only say what, in his opinion, are the differences or resemblances between one machine and another, and how far they are regarded by mechanicians as material, or substantial. But the question of what constitutes a fresh invention, or what, upon a given state of facts, amounts to a change so great as to support an independent patent for a new thing, is a question of law; and this question is involved in every issue as to the identity of two things, whether it relates to the question of infringement or of prior invention.[2]

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[1] In Allen *v.* Blunt, 3 Story's R. 742, 748, 749. Mr. Justice Story, discussing the relative value of scientific witnesses and mere artisans, said "The very highest witnesses to ascertain and verify the novelty of an invention, and the novelty or diversity of mechanical apparatus and contrivances, and equivalents, are beyond all question, all other circumstances being equal, scientific mechanics; they are far the most important and useful to guide the judgment and *to enable the jury to draw a safe conclusion, whether the modes of operation are new or old, identical or diverse.*"

[2] See the instructions of the court in Walton *v.* Potter, Webs. Pat. Cas.

§ 377. The evidence for the defendant, upon the question of novelty, will of course consist of proof, positive in its nature, that the thing patented existed before; and if any credible evidence of this is adduced, it will outweigh all the negative evidence that can be offered by the plaintiff.[1] But whenever the defendant relies on the fact of a previous invention, knowledge, or use of the thing patented, he must give notice of the names and places of residence of the persons who he intends to prove have possessed a prior knowledge or had a prior use of it.[2]

§ 378. Persons who have used the machine patented are not thereby rendered incompetent as witnesses, on account of interest.[3] It has been held that a witness who was patentee in another patent, and had sold to the defendant the right to use the machine, the use of which was complained of as an infringement, was a competent witness, since any verdict that the plaintiff might recover could not be given in evidence by the plaintiff in an action against the witness.[4] A patentee who has assigned the whole of his interest in the patent, is a competent witness for the assignee in support of it.[5] A licensee is a competent witness for the patent, in an action for an infringement, for he has no direct pecuniary interest in supporting the patent, but it may be for his advantage that it should not be supported.[6] Evidence, on the part of the plaintiff, that the per-

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585, 586, 587, 589, 591; Huddart *v.* Grimshaw, *Ibid.* 85, 86, 91, 92, 95. See also the examination of certain experts in Russell *v.* Cowley, *Ibid.* 462, before Lord Lyndhurst, in the Exchequer, cited *ante*.

[1] Manton *v.* Manton, Dav. Pat. Cas. 250.

[2] As to the evidence appropriate to the different defences to an action, see *ante*, in the chapter on Actions at Law.

[3] Evans *v.* Eaton, 7 Wheat. 356; Evans *v.* Hettich, *Ibid.* 453; 2 Greenl. on Evid. § 508.

[4] Treadwell *v.* Bladen, 4 Wash. 704.

[5] Bloxam *v.* Elsee, 1 C. & P. 563.

[6] Derosne *v.* Fairie, Webs. Pat. Cas. 154.

sons, of whose prior use of a patented machine the defendant had given evidence, had paid the plaintiff for licenses, ought not to be absolutely rejected, though entitled to very little weight.[1]

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[1] Evans *v.* Eaton, 3 Wheat. 454.

CHAPTER V.

QUESTIONS OF LAW AND QUESTIONS OF FACT.

§ 379. The several provinces of the court and the jury, in the trial of patent causes, have already been incidentally alluded to; but it may be proper to give here a summary of the principal questions which constitute matters of fact and matters of law.

§ 380. The question of *novelty* is a question of fact for the jury. It embraces the two questions of whether the plaintiff, or patentee, was the inventor of the thing patented, and whether the thing patented is substantially different from any thing before known. These are questions of fact for the jury upon the evidence.[1] But it is for the court to instruct the jury what constitutes novelty in the sense of the patent law, as well as what amounts to a sufficiency of invention to support a patent. So, also, the question of prior public use is a question of fact.[2]

§ 381. The question whether the renewed patent is for the same invention as the original patent, is also a question of fact for the jury;[3] as is likewise the question whether the invention had been abandoned to the public.[4]

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[1] Whittemore *v.* Cutter, 1 Gallis. 478; Lowell *v.* Lewis, 1 Mas.; Carver *v.* Braintree Manuf. Co. 2 Story's R. 432, 441.

[2] Ante, § 53, note 3.

[3] Carver *v.* Braintree Manuf. Company, 2 Story's R. 432, 441.

[4] Ante, § 57, note 2.

§ 382. The question of *utility* is a question of fact, under some circumstances, and under other circumstances it may be for the court, without referring it to the jury, to pronounce the patent void. We have seen that a "useful invention," in the sense of our law, is one not injurious or mischievous to society, and not frivolous or insignificant, but capable of use for a purpose from which some advantage can be derived; and that when an invention is useful in this sense, the degree or extent of its usefulness is wholly unimportant. There are, therefore, two modes, in which the utility of an invention may be impeached; first, when it appears, on the face of the letters-patent and specification, that the invention is injurious to the morals or health of society; secondly, when it appears, on the evidence, that the thing invented, although its object may be innocent or useful, is not capable of being used to effect the object proposed.

§ 383. The question whether the invention is useful, in the first sense, is a question whether the patent is void, on the face of it, as being against public policy; or in other words, because the subject-matter disclosed by the patent is not a patentable subject. This is a question of law for the court.[1] But when it does not appear that the invention has any noxious or mischievous tendency, but on the contrary that its object is innocent or salutary, there may be a farther question, whether the means by which the inventor professes to accomplish that object will in practice succeed or fail. It is not essential to the validity of a patent, that the success of the means made use of should be complete, or that the thing invented should supersede any thing else used for the same purpose; because the law looks only to the fact that the invention is capable of some use. Thus, if a machine is useful for some of the cases for which it is intended, although cases may occur in which it does

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[1] Langdon *v.* De Groot, Paine's C. C. R. 203; Lowell *v.* Lewis, 1 Mason, 182; Phillips on Patents, p. 432.

not answer, it is still useful, in this sense of the patent law;[1] but if any thing claimed as an essential part of the invention is useless altogether, the patent is invalid, because there is a total failure in point of usefulness.[2] These questions, whether the invention is capable of use for the purpose for which it is claimed, and whether any thing claimed as essential is entirely useless, depend upon evidence, and are questions of fact for the jury.[3]

§ 384. In like manner, the question whether an invention is frivolous or insignificant, is a question of law. If the object proposed to be accomplished is a frivolous or insignificant object, from which no advantage can be derived to the public, it is for the court to pronounce the patent void, as not being for a patentable subject. But if the object proposed is not clearly frivolous and unimportant, but the means by which it is proposed to be accomplished do not succeed in producing the result, the question returns to the usefulness of the means, and this again becomes a question of fact for the jury.

§ 385. The construction of the specification, as to the extent of the claim, belongs to the province of the court. The court must determine, upon the whole instrument, what the claim actually covers, and whether the patent is valid in point of law. The jury are, therefore, to take the construction of the patent, as to the extent of the claim, from the court, and to determine whether any thing that is included in the claim is not new. But if the specification contains terms of art, which require explanation, by means of evidence, it is for the jury to find the meaning of those terms.[4]

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[1] Haworth *v.* Hardcastle, Webs. Pat. Cas. 480.

[2] Lewis *v.* Marling, Webs. Pat. Cas. 490, 495.

[3] Haworth *v.* Hardcastle, *ut sup.*; Lewis *v.* Marling, *ut sup.*; Hill *v.* Thompson, 3 Meriv. 630, 632; Lowell *v.* Lewis, 1 Mason, 182; *Bedford v.* Hunt, Ibid. 302.

[4] Ante, § 123, 124.

§ 386. And here it is very important to ascertain whether there are any principles, which are to guide the court in construing patents, peculiar to these instruments, or whether they are to be construed in all respects like other written instruments, and without the aid of extrinsic evidence. In one sense, a patent is a deed, being a grant of the government under seal; the letters-patent, the specification, and the drawings annexed, being taken together as one instrument. But it often happens that the extent of the claim is not manifest on the face of the specification itself. The question arises, therefore, how is the court to ascertain the precise extent of the claim, as matter of law? The specification is a written instrument, in which the patentee has undertaken to state the invention which he professes to have made, and for which he has obtained letters-patent. In determining the real extent of the claim thus made, it is obvious that the actual invention of the party is a necessary auxiliary to the construction of the language which he has employed in describing it. The thing of which the patentee was the real inventor is what he was entitled to claim, and the question, in all cases requiring construction, will be, whether he has claimed more or less than that thing, or exactly what that thing is. If he has claimed more than his actual invention, that is, more than that of which he was an original and the first inventor, his claim is inoperative, under our law, *pro tanto*. If he has claimed less, his exclusive right is restricted to what he has claimed. If he has claimed the just extent of his actual invention, he is entitled to hold it, in all its length and breadth.

§ 387. There are two sources to which the court is entitled to resort in construing a claim. In the first place, resort may be had to the descriptive parts of the specification, where the patentee has undertaken to state what his invention is; in other words, the court is to inquire what the patentee has said that he had invented. If his statement or description of the invention is clear and explicit, then the language in which he has made his claim, which is generally to be found in a summary statement of

the subject-matter for which he asks a patent, may and should be construed so as to include the actual invention previously set forth, if it can be so construed without violation of principle ;[1] for the general maxim, under which the construction is to be pursued, is, according to the spirit of the modern authorities, *ut res magis valeat quam pereat.*

§ 388. But it may be uncertain upon the terms of the descriptive parts of the specification, if unaided by evidence, what the precise extent of the invention was : and this may happen, without that degree and kind of ambiguity which renders a patent void for uncertainty, or because the directions could not be carried out by a competent workman. For instance, the patentee may state that he employs something which turns out not to be new ; and the question will then be, whether he has so described that thing as to claim it as part of his invention ; — or his invention may be so stated, as to render it doubtful, whether he has invented or discovered the general application of a principle to produce a particular effect, and is, therefore, entitled to claim all the forms in which the same principle can be applied to produce the same effect, or, whether he has only invented or discovered a form of giving effect to a principle the application of which was known before. So, too, on the general description of a machine, or a manufacture, which, as a whole, may be new, it may be uncertain, whether the

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[1] See Russell *v.* Cowley, Webs. Pat. Cas. 469, 470 ; Davoll *v.* Brown, 1 Woodbury & M. 53, 59. Where the construction depends, as it generally does, in the first instance, on the terms of the specification, the preamble may sometimes be resorted to, Winans *v.* Boston & Providence Railroad, 2 Story's R. 412 ; sometimes the body of the specification, Russell *v.* Cowley, *ut sup.* 459, 463 ; sometimes the summing up, Moody *v.* Fiske, 2 Mason, 112, 118. Generally, the whole is examined together, unless the summary seems explicitly to exclude the rest of the specification and to require a construction by itself alone. MacFarlane *v.* Price, Webs. Pat. Cas. 74; 1 Starkie, 199 ; The King *v.* Cutler, Webs. 76, note; 1 Starkie, 354 ; Ames *v.* Howard, 1 Sumner, 482, 485. See Davoll *v.* Brown, *ut sup.*

party invented the various parts of which that whole is composed, or only invented the combined whole, as he has produced it; and, if the latter, whether he invented the whole, as it may embrace all the forms and dimensions in which that whole can be produced, or, whether his claim is to be confined to certain forms and dimensions, there being other wholes, of the same general character, of other forms and dimensions, which it does not include.

§ 389. In such cases, the character and scope of the invention can only be ascertained, by attending to what the evidence shows is new or old; to the state of the art; to the fact of whether the principle, which the patentee has employed, had been discovered and applied before, and, therefore, that he could have invented only a new form of the application, or, whether he has invented the application of the principle itself, and, consequently, is entitled, if he has not restricted himself, to claim the same application of the same principle, under other forms or dimensions, or by other means, than those which he has specifically described. The question, whether he has limited himself to particular forms, dimensions, or methods, necessarily involves an inquiry into the substance and essence of his invention. In other words, before it can be ascertained, in doubtful cases, what he has claimed, some attention must be paid to his actual invention, as ascertained on the evidence.

§ 390. To what extent, then, is the court entitled to receive evidence of the actual invention, and how is that evidence to be applied to the construction of the claim? In the progress of a *nisi prius* trial, the state of the art, the surrounding circumstances in which the inventor was placed, the previous existence of some things mentioned or referred to in the patent, will all be likely to be developed on the evidence; and these facts may materially affect the construction to be given to the claim. It has been said, and with great propriety, that, in the exercise of the duty of determining what the claim is, in point of law, the

judge must gather as he goes along; informing himself upon the evidence, and observing what facts are controverted, and what facts are not controverted, which bear upon the meaning of the claim, in reference to its extent.[1] If the facts material to the construction are not left in doubt on the evidence, the construction will be given to the jury, absolutely; but, if the evidence requires a finding of facts by the jury, the construction will be given to them conditionally.[2]

§ 391. Among the facts which will thus exercise an important influence on the extent of the claim, is the previous existence of something mentioned in the specification. If it is manifest on the face of the terms, in which the patentee has described his invention, that he has included something of which he was not the inventor, his patent cannot be allowed to cover it. But it may be doubtful, whether he has so included the thing, which the evidence shows to be old; and then the degree or extent to which that thing was known before, its great familiarity and constant use for analogous purposes, will be important elements in the question, whether the patentee has claimed it as of his own invention. This consideration has given rise to the rule, that the patentee is to be presumed not to intend to claim things which he must know to be in use; which is only another application of the broader rule, that a specification should be so read, as, consistently with the fair import of language, will make the claim coextensive with the actual discovery or invention.[3]

§ 392. Another important consideration will be the state of the art. If, for instance, a patent contemplates the use of certain substances, although it may make use of terms extensive

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[1] Per Lord Abinger, C. B., in Neilson *v.* Harford, Webs. Pat. Cas. 350, 351.

[2] Ibid. p. 370.

[3] Haworth *v.* Hardcastle, Webs. Pat. Cas. 484, 485.

enough to embrace other substances, which, in the progress of the art, have been ascertained to be capable of the same use, but at the time of the patent were not known to be so, or, being known at the time to be capable of the same use, were yet so expensive as not to be expected to be in use for the same purpose, the general terms of the specification will be so interpreted as to include only those substances *ejusdem generis* with the particular substances mentioned, which may reasonably be supposed, on the state of the art, to have been contemplated at the time. This is to be ascertained by evidence.

§ 393. Thus, on a specification describing "An improved Gas apparatus, for the purposes of extracting inflammable gas by heat, from pit coal, or tar, *or any other substance* from which gas, or gasses capable of being employed for illumination can be extracted by heat;" it appeared that it was known, at the date of the patent, as a philosophical fact, that oil would yield inflammable gas, but that the apparatus described in the specification could not be used advantageously, if at all, for the making of gas from oil; it was answered, that it was a general opinion at the time, that nothing but coal would be cheap enough for purposes of illumination; and the court held that the patentee must be understood to mean things that were in use, and not every thing which would produce gas, but, from being so expensive, was never expected to be in use.[1]

§ 394. Sometimes, the construction may rest on facts, which are so referred to as to make a part of the description and to govern it. If these facts are controverted, they are to be left to the jury. But if they are proved, or admitted, the court will take notice of them in giving a legal construction to the instrument. Thus, where the question was, whether, in the specification of an improvement in the machine, known by the name of speeder, double-speeder, or fly-frame, used for roving

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[1] Crossley *v.* Beverley, Webs. Pat. Cas. 106, 107, 108.

cotton, preparatory to spinning, the patentee had confined himself to the use of the bow-flyer, that is, a flyer in "one continuous piece," as part of his new combination; it appeared that the specification thus described the invention: "It will be seen that the flyers, as used by me, and shown at, &c., *are made in one continuous piece, instead of being open at the bottom, as is the case with those generally used in the English fly-frame,* and this, among other reasons, enables me to give the increased velocity above referred to." The patentee then summed up his claim, as follows: "What I claim as new, &c., is the arrangement of the spindles and flyers, in two rows, *in combination with the described arrangement of gearing*," which he had previously pointed out. Although the language here did not admit of much doubt, as to the kind of flyer intended to be claimed, the court took notice of the admitted or apparent facts, which tended to show that the bow-flyer alone was intended; one of which was, that the bow-flyer alone could be geared, as the patentee had described his flyer to be, in two places, through its bottom; the other form of the open-flyer having no bottom susceptible of being used or geared in that manner.[1]

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[1] Davoll *v.* Brown, 1 Wood. & M. 53, 58, 59, 60. In this case, Mr. Justice Woodbury said: "The construction seldom rests on facts to be proved by parol, unless they are so referred to, as to make a part of the description and to govern it; and when it does at all depend on them, and they are proved or admitted, and are without dispute, as here, it is the duty of the court, on these facts, to give the legal construction to the instrument. But, whether the court gave the right construction to the patent in dispute, so far as regards the kind of flyer to be used in it, is a proper question for consideration now; and, if any mistake has occurred in relation to it, in the hurry and suddenness of a trial, it ought to be corrected, and will be most cheerfully. There is no doubt, as to the general principle contended for by the defendant in this case, that a patentee should describe, with reasonable certainty, his invention. Several reasons exist for this. One is, the Act of Congress itself requires, that he 'shall, particularly, specify and point the part, improvement, or combination, which he claims as his own invention.' And another is, that, unless this is done, the public are unable to know whether they violate the patent or not, and are also unable, when the term expires, to make machines correctly, and derive the proper advantages from

§ 395. The sufficiency of the description, to enable compe-

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the patent. These principles, however, are not inconsistent with another one, equally well settled, which is, that a liberal construction is to be given to a patent, and inventors sustained, if practicable, without a departure from sound principles. Only thus can ingenuity and perseverance be encouraged to exert themselves, in this way, usefully to the community; and only in this way can we protect intellectual property, the labors of the mind, productions and interests, as much a man's own, and as much the fruit of his honest industry, as the wheat he cultivates, or the flocks he rears. Grant *v.* Raymond, 6 Peters, 218; See also Ames *v.* Howard, 1 Sumn. 482, 485; Wyeth *v.* Stone, 1 Story, 273, 287; Blanchard *v.* Sprague, 2 Story, 164. — The patent laws are not now made to encourage monopolies of what before belonged to others, or to the public, — which is the true idea of a monopoly, — but the design is to encourage genius in advancing the arts, through science and ingenuity, by protecting its productions of what did not before exist, and of what never belonged to another person or the public. — In this case, therefore, the jury were instructed to consider the case under these liberal views, unless the invention, such as the court construed it to be, in point of law, was described with so much clearness and certainty, that other machines could readily be made from it, by mechanics acquainted with the subject.

"Looking to the whole specification and drawing, both the figure and language, could any one doubt that bow-flyers were intended to be used in the new combination which was patented? The figure is only that of a bow-flyer, so is the language. First, the spindles are described as working up and down 'through the bottom of the flyers, as seen at *a*,' which is not possible in the case of the open-flyer, as that has no bottom for the spindle to work in.

Again, the specification says, "to the bottom of each flyer a tube is attached, as seen at *b*., figures 1 and 2," which is impracticable with an open flyer. Again, it says, motion is communicated to the flyer independently, but that is not feasible with the open flyer. And finally, towards the close, in order to remove all possible doubt, the specification adds, "it will be seen, that the flyers, as used by me, and shown at *ii* and *kk*, are made in *one continuous piece*, instead of being open at the bottom, as is the case with those generally used in the English fly-frames." All know, that the flyer in one continuous piece is the bow-flyer. Besides this, other admitted or apparent facts tended to show that the bow-flyer alone was intended. One great advantage, claimed from the new combination in the patent, was an increased velocity of the spindle. Thus, in the early part of the specification, it is stated, among the advantages of his improvement, that "the machine will bear running at a much higher velocity than the English fly-frame." And

tent persons to apply the invention, is a question of fact for the jury, on the testimony of experts and the language itself.[1] But it does not follow from this, that the construction of the specification is to be drawn into the province of the jury. Their province is, after having been informed what the specification has said, to determine whether the directions are sufficiently clear

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towards the close he says, that it is the use of the flyer in "one continuous pieee," that is, the bow-flyer, instead of the open one, as in the English fly-frame, which, "among other reasons, enables me to give the increased velocity above referred to." How could there, then, be any reasonable doubt, that in his patent it was this bow-flyer he intended to use in his new combination?

In truth he not only says so, and could not otherwise obtain one of his principal objeets and advantages, but it is manifest from the form of the flyer itself, and was not doubted at the trial, that only the bow-flyer could be geared, as he described his flyer to be, in two places, through its bottom; the other form of the open flyer confessedly having no bottom susceptible of being used, or geared in this manner. . . . . There was no fact in doubt about this, to be left to the jury; and there was but one construction as to the kind of flyer intended to be used, that was consistent either with the drawings, or the express language employed, or the chief object of the machine in its increased velocity, or in the practicability of gearing it in the manner before described by him in two important particulars, or of giving motion to it "independently." It is as clear and decisive on this point as if he had said *the before described* spindles and flyers, because he says the spindles and flyers "with the described arrangement of the gearing," and no other spindles or flyers, but the short spindles and bow-flyers could be geared in the manner before described, through the bottoms of the latter.

Matters like these must be received in a practical manner, and not decided on mere metaphysical distinctions. Crossley *v.* Beverley, 3 Car. & Payne, 513, 514.

Taking with us, also, the settled rules, that specifications must be sustained if they can be fairly, (Russell *v.* Cowley, 1 Cromp. Mees. & Rose. 864, 866; Wyeth *v.* Stone, 1 Story, 273, 287,) that we should not be astute to avoid inventions, and that it is a question for the court, and not the jury, whether the specification can be read and construed intelligibly in a particular way, (Whitney *v.* Emmelt, Baldw. 303, 315; Blanchard *v.* Sprague, 2 Story, 164, 169,) we think the instructions given at the trial in this case were correct, and that no sufficient ground has been shown for a new trial."

[1] Lowell *v.* Lewis, 1 Mason, 190, 191.

and explicit, to enable a competent workman to practise the invention. The information of what the specification has said, is to come from the court ; although it may happen, that in determining the meaning of the specification the aid of the jury will be required to ascertain the meaning of words of art, or the surrounding circumstances, which govern that meaning. When such words of art, or such surrounding circumstances do affect the meaning, the court will instruct the jury that the specification has said so and so, according as they find the meaning of the scientific terms, or the existence of the surrounding circumstances. But if there are no words of art, and no surrounding circumstances, to be ascertained, the court, as we have seen, will instruct the jury what the specification has said ; and then the jury will determine, the specification having said so and so, whether the description is sufficient to enable a competent workman to put the invention in practice.[1]

§ 396. There is no positive rule by which it can be determined, in a given case, *a priori*, whether the meaning of words of art, or the bearing of surrounding circumstances, affects the sense of the specification ; or which limits the right of the plaintiff to offer evidence to show that its meaning is so affected. The plaintiff is always entitled to say, that his specification requires the explanation of facts, to determine the extent of his claim and the character of his invention ; and the only course that can be taken is, for the court to receive and watch the evidence, and to apply it to the construction, taking care that it be not allowed to go so far as to supply positive omissions, which would render the specification defective. Within this limit, the construction, which is nothing more than the ascertaining of the

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[1] It follows, from the proposition that the court are to declare what the specification has said, that is also a question of law upon the construction of the specification, whether the invention has been specifically described with reasonable certainty. This is a distinct question from the intelligibility of the practical directions, although both may arise upon the same passages. *Ante*, §§ 123, 124, 126, note 2; 130, 134, note 3; 136, note 1, 2.

meaning of what is written, may always be affected by evidence; which is to be taken into view, although no conflict arises, requiring a finding of the jury, because the court can have no judicial knowledge either of the terms of art, or of the surrounding circumstances, and cannot say, until it has heard the evidence, that the meaning is not to be affected by them.

§ 397. The provinces of the court and the jury, then, are distinct, and upon this particular question of the practicability of the specification, it is of consequence that they should not be confounded. When it is put to a jury to determine whether a specification has so fully and accurately described the invention, that others can practise it from the description, the danger sometimes arises, of their undertaking to determine what the claim is; because the extent and character of the claim itself may depend on the same words, on which they are to decide the intelligibility of the directions, and may thus seem to be inseparably blended with the question of that intelligibility. But in truth these questions are always separable, and care should be taken to separate them. In one aspect, every thing is for the jury, which bears on the question, whether the specification sufficiently describes the mode of carrying the invention into effect; but, on the other hand, the meaning of the very passages on which this question arises, in relation to the prior question of what the specification has said, is for the court, after the facts which bear upon that meaning have been ascertained.

§ 398. The case of Neilson *v.* Harford presents an apt illustration of the nicety and importance of these distinctions. Mr. Neilson invented the application of the hot blast to smelting furnaces, by introducing between the blowing apparatus and the furnace a chamber or receptacle, in which the air was to be heated on its passage, before it entered the furnace. After describing the mode in which this was to be accomplished, his specification said, "The form or shape of the vessel or recepta-

cle [the vessel in which the air was to be heated] is immaterial to the *effect*, and may be adapted to the local circumstances or situation." This direction it was contended was calculated to mislead a workman, because it was not true; it was said, in point of fact, that the size or shape of the heating vessel was immaterial to the "effect" on the air in that vessel; and this, it was argued, was the "effect" concerning which this delusive statement was made in the specification. On the other hand, the plaintiff contended that the meaning of this passage was, that the size and shape of the heating vessel were immaterial to the effect *on the furnace*, and that it was true, in point of fact, that some beneficial effect might be produced on the furnace, whatever the size or shape of the heating vessel might be, provided the temperature of the air be sufficiently raised.

§ 399. The principal question raised upon the pleadings was, whether the directions were calculated to mislead a workman who might be employed to construct such an apparatus, by stating that which was not true. This, it was allowed, was a question for the jury, but before it could be determined, it was necessary to ascertain what the specification had said; since the fact of its having or not having stated what was not true, would depend altogether upon the sense in which the words were to be received. At the trial, the presiding judge construed the word "effect" to mean the effect on the air in the heating vessel; and the jury having found that the size and shape of the heating vessel were material to the extent of beneficial effect produced, a verdict was entered for the defendants.

§ 400. Upon a motion to enter the verdict for the plaintiff, on this issue, founded on the special verdict, which also ascertained that some beneficial result would be produced from any shape of the heating vessel, it was argued with great force and ingenuity, that the question being whether the specification could or could not be carried into effect, which is confessedly a question for the jury, the whole question of the meaning of

the passages on which they were to decide the sufficiency of the specification, was also for the jury, who were to say whether the words were or were not sufficient for carrying into practical effect the invention or discovery, which the patentee supposed he had made. It was further argued, that the meaning of the words depended upon evidence; whereas, if the court were to pass upon the meaning of the paper, they must act upon the written paper alone, without evidence. But the court laid down the doctrine that in all cases the meaning of the specification is for the court; and, although the question which goes to the jury is whether the directions in the specification are sufficient or not, it is necessary for the court to declare what the specification has said. This must be done, either by taking into view at the time the evidence which bears upon the meaning, where it is not controverted, or by leaving to the jury, as matters of fact, to pass upon that evidence, in order to ascertain the meaning of scientific words, or the surrounding circumstances on which the construction depends. In the one case, the construction is given absolutely; in the other, it is given conditionally, because dependent upon facts to be found by the jury.[1]

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[1] Neilson *v.* Harford, Webs. Pat. Cas. 295, 349. Sir W. Follett argued as follows: "I submit to your lordships that the whole question upon the validity of the specification, that is, on the meaning of the specification, and whether it can or cannot be carried into effect, is a question for the jury and not for the court, and that the jury are to put their construction upon the meaning of the words, and that the jury are to say whether the words are or not sufficient, and that it is for them to say, whether the specification does sufficiently show the mode of carrying the invention and discovery which the patentee supposed he had made, into practical effect. [Lord Abinger, C. B.: Why is the specification, which is a written instrument, more particularly to be considered by a jury, than any other instrument? The meaning of scientific words must be matter of evidence.] [Alderson B.: The construction of it is surely for the court.] I do not know quite the extent to which it is supposed the authorities have gone in stating that certain papers are for the court. In many cases, undoubtedly, written papers are for the court, but I apprehend that is by no means a general doctrine of law; but that written papers, which involve a question of fact like this, whether or not the party has sufficiently described the invention, that that written paper is for the jury

§ 401. The question whether the invention disclosed by the specification is a proper subject for a patent, is a question of

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and not for the court, because it is for the jury to say, as a matter of fact, whether there be or not a sufficient description in that instrument to enable parties to carry it into effect. That I apprehend to be a question entirely for the jury. Certainly, the whole of this is a question of evidence, and a question of fact. It is a question of fact as relates to the paper; it is a question of fact as regards the evidence at the trial; it is not a question of law at all; and I do not know any rule which is to say that the court is to construe that specification, and to take it from the jury, because, supposing the fact to be that evidence was given at the trial on scientific matters, which evidence would aid the meaning or the construing of the instrument, your lordships can have no judicial notice of that at all. If it be a written paper for your lordships to decide upon, it must be without evidence. It is not that your lordships can come to a conclusion upon the meaning of the paper by looking at the evidence at the trial, but if it comes within the rule, that is a written paper which the court is to act upon, then it must act upon the written alone. I think I can show your lordships that in every single case in which any question has arisen, it has been submitted to the jury, not decided by the court. [Lord Abinger, C. B.: Not consistently with my recollections; I have always thought that the meaning of the specification was to be determined by the court. That meaning may be varied by the evidence of particular words. A man must gather as he goes along in order to construe the written instrument. It is quite new to me that it is not to be considered by the court.] [Alderson B.: Surely the court is to tell the jury what the specification has said. If the specification contains words of art, the court is to say — If you believe these words of art to mean so and so, the specification has said so and so; leaving the question of words of art to the jury. But if there are no words of art, what the specification has said is to be construed by the court. Then it is to be left to the jury, whether the specification having so said, it is or not a sufficient description of the invention according to their judgment.] I do not mean the validity of the specification as to questions in which you may direct nonsuits in point of law arising out of objections of a different kind, but that this question, whether or not the specification sufficiently describes the mode of carrying the invention into effect, that every thing relating to that is for the jury, and not for the court — the meaning of the passages in the specification, and every thing. I should submit to your lordships that the whole of it was for he jury, and not for the court. [Alderson, B.: That there are some things n the specification which are questions of fact is true, and there are some things in the specification which are questions of law; the construction is to e given by the court, but the intelligibility of it is for the jury.] That is

law, on which the court will instruct the jury. It may involve the finding of a variety of facts; but when the facts are all ascertained, it is purely a question of law, whether the invention or discovery is a patentable subject. This is a distinct and very different question from that of the novelty of the invention. The thing claimed as the subject of a patent may be entirely new, and yet it may not fall within that class of discoveries or inventions recognized by the patent law as the subjects of patents, and as such comprehended within the description of the statute. Thus, the subject-matter may turn out to be the application of an old or well-known thing, to a new purpose, constituting a new use only so far as the occasion is concerned; which the law decides is not the subject of a patent.[1] Or, on the other hand, the claim may be for the use of a known thing in a known manner, to produce effects already known, but producing those effects so as to be more economically or beneficially enjoyed by the public; which the law decides is a patentable subject.[2] In these and other cases, where the question arises, upon all the facts attending and surrounding the alleged invention, whether it is a patentable subject, it is for the court to settle that question. Of course, the novelty of the invention is a pre-requisite to the validity of the patent, and this is a question of fact; but the alleged invention being ascertained to be new, it is still to be determined whether it is that species of invention to which the law gives the protection of a patent.

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all I am contending. [Lord Abinger, C. B.; The intelligibility means with reference to words of science, or matters in it which persons may explain so as to satisfy the jury. You are discussing an abstract principle where it is not necessary; if you take an abstract principle, I must say the meaning of the specification is a matter of law, and that the judge must be informed, by evidence, of the facts, and then he must leave those facts to the jury, for them to find whether they be true or not.] See also Ante, note.

[1] Losh *v.* Hague, Webs. Pat. Cas. 202, 207; Howe *v.* Abbott, 2 Story's R.

[2] Crane *v.* Price, Webs. Pat. Cas. 408, 409.

§ 402. The question of infringement is, as has already been stated, a question whether the invention of the defendant is substantially the same thing as that of the plaintiff. The identity of two things is a matter of fact, depending upon evidence; and although it is to be determined under the guidance of those principles which determine what constitutes identity and diversity in the sense of the patent law, yet it is for the jury to determine, as matter of fact, under proper instructions, whether the two things are the same or different.[1]

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[1] Boulton *v.* Bull, 2 H. Bl. 4; Whittemore *v.* Cutter, 1 Gallis. 478; Pennock *v.* Dialogue, 4 Wash. 538; Lowell *v.* Lewis, 1 Mason, 191; Phillips on Patents, 131.

CHAPTER VI.

JURISDICTION OF CONGRESS AND THE FEDERAL COURTS.

§ 403. The Constitution of the United States confers upon 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 and discoveries." This power is general; there is no distinction which limits it to cases where the invention has not been known or used by the public. Accordingly, it is well settled, that Congress may pass general or special laws, in favor of inventors; and they may leave a particular inventor to the protection afforded by a general law, or they may specially exempt his case from the operation of a general law, by extending his exclusive right beyond the term fixed by such general law. This may be done after the invention has been in the possession of the public, as well as before; for when the exclusive privilege has once been secured, the grant does not imply an irrevocable contract with the public, that, at the expiration of the period, the invention shall become public property.[1]

§ 404. Congress, therefore, has power to pass an act which will operate retrospectively to give a patent for an invention which is already in public use; but no act, it has been said, ought to be construed to operate retrospectively, unless such a construction is unavoidable.[2]

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[1] Evans *v.* Eaton, 3 Wheaton, 545; S. C. Peters Circ. C. R. 322; Evans *v.* Hettich, 7 Wheat. 453; Blanchard *v.* Sprague, 2 Story's R. 164; S. C. 3 Sumner, 535; Woodworth *v.* Hall, 1 Woodb. & M. 248.

[2] Blanchard *v.* Sprague, *ut supra*. Letters-patent were granted to the

§ 405. The Act of Congress, of July 4, 1836, § 17, declares, "that all actions, suits, controversies, and cases arising under

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plaintiff, Thomas Blanchard, on the 6th of Septemher, 1819; and being deemed inoperative, by reason of defects in the specification, new letters-patent were granted on the 20th of January, 1820, for the space of fourteen years. Afterward, by Act of Congress, passed the 30th of June, 1834, the sole right was granted to the plaintiff, to make, use, and vend his invention for the term of fourteen years, from the 12th of January, 1834. This act not being thought to describe with sufficient accuracy the letters-patent, to which it was intended to refer, an additional act was passed on the 6th of February, 1839, renewing the act of the 30th of June, 1834, and correcting the date of the 12th of January, 1834, to the 20th of January, 1834. This last act was as follows: "*An Act to amend and carry into effect the intention of an Act entitled An Act to renew the Patent of Thomas Blanchard, approved June 30th*, 1834. Sec. 1. Be it enacted, &c., That the rights secured to Thomas Blanchard, a citizen of the United States, by letters-patent granted on the sixth of September, eighteen hundred and nineteen, and afterwards on a corrected specification on the twentieth day of January, Anno Domini eighteen hundred and twenty, be granted to the said Blanchard, his heirs and assigns, for the further term of fourteen years from the 20th of January, eighteen hundred and thirty-four, said invention so secured being described in said last-mentioned letters as an engine for turning or cutting irregular forms out of wood, iron, brass, or other material which can be cut by ordinary tools. Provided, that all rights and privileges heretofore sold or granted by said patentee to make, construct, use, or vend the said invention, and not forfeited by the purchasers or grantees, shall enure to and be enjoyed by such purchasers or grantees respectively, as fully and upon the same conditions during the period hereby granted as for the term that did exist when such sale or grant was made. Sec. 2. And be it further enacted, that any person who had *bonâ fide* erected or constructed any manufacture or machine for the purpose of putting said invention into use, in any of its modifications, or was so erecting or constructing any manufacture or machine for the purpose aforesaid, between the period of the expiration of the patent heretofore granted on the thirtieth day of June, one thousand eight hundred and thirty-four, shall have and enjoy the right of using said invention in any such manufacture or machine erected or erecting as aforesaid, in all respects as though this act had not passed. Provided, that no person shall be entitled to the right and privilege by this section granted, who has infringed the patent right and privilege heretofore granted, by actually using or vending said machine before the expiration of said patent, without grant or license from said patentee or his assignees, to use or vend the same."

any law of the United States, granting or confirming to inventors the exclusive right to their inventions or discoveries, shall be originally cognizable, as well in equity as at law, by the Circuit courts of the United States, or any district court having

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Upon this Act, Mr. Justice Story said, "Then it is suggested, that the grant of the patent by the Act of Congress of 1839, ch. 14, is not constitutional; for it operates retrospectively to give a patent for an invention, which, though made by the patentee, was in public use and enjoyed by the community at the time of the passage of the act. But this objection is fairly put at rest by the decision of the supreme court in the case of the Patent of Oliver Evans. Evans *v.* Eaton, 3 Wheat. 454. For myself I never have entertained any doubt of the constitutional authority of Congress to make such a grant. The power is general to grant to inventors; and it rests in the sound discretion of Congress to say, when and for what length of time and under what circumstances the patent for an invention shall be granted. There is no restriction which limits the power of Congress to cases, where the invention has not been known or used by the public. All that is required is, that the patentee should be the inventor. The only remaining objection is, that the act is unconstitutional, because it makes the use of a machine constructed and used before the time of the passage of the Act of 1834, ch. 213, and the grant of the patent under the act of 1839, ch. 14, unlawful, although it has been formerly decided, that under the Act of 1834, the plaintiff had no valid patent; and so the defendant, if he constructed and used the machine during that period, did lawful acts, and cannot now be retrospectively made a wrong-doer. If this were the true result of the language of the Act, it might require a good deal of consideration. But I do not understand, that the act gives the patentee any damages for the construction or use of the machine, except after the grant of patent under the Act of 1839, ch. 14. If the language of the act were ambiguous the court would give it this construction, so that it might not be deemed to create rights retrospectively, or to make men liable for damages for acts lawful at the time when they were done. The Act of Congress passed in general terms ought to be so construed, if it may, as to be deemed a just exercise of constitutional authority; and not only so, but it ought to be construed, not to operate retrospectively or *ex post facto*, unless that construction is unavoidable; for even, if a retrospective act is or may be constitutional, I think I may say, that, according to the theory of our jurisprudence, such an interpretation is never adopted without absolute necessity; and courts of justice always lean to a more benign construction. But in the present case there is no claim for any damages but such as have accrued to the patentee from a use of his machine since the grant of the patent under the Act of 1839, ch. 14.

the powers and jurisdiction of a circuit court, which courts shall have power, upon bill in equity filed by any party aggrieved, in any such case, to grant injunctions, according to the course and principles of courts of equity, to prevent the violation of the rights of any inventor as secured to him by any law of the United States, on such terms and conditions as said courts may deem reasonable: Provided, however, that, from all judgments and decrees, from any such court rendered in the premises, a writ of error or appeal, as the case may require, shall lie to the Supreme Court of the United States, in the same manner and under the same circumstances as is now provided by law in other judgments and decrees of circuit courts, and in all other cases in which the court shall deem it reasonable to allow the same." [1]

§ 406. The jurisdiction of the circuit courts of the United States embraces, therefore, all cases, both at law and in equity, arising under the patent laws, without regard to the citizenship of the parties or the amount in controversy; and it seems to be the better opinion, that this jurisdiction is exclusive, and that the state courts cannot entertain a suit for the infringement of a patent, or to declare a patent void.[2]

§ 407. When a case is sent to the Supreme Court of the United States, under the discretion conferred upon the court below by the seventeenth section of the Act of 1836, the whole case is to go up. The word "reasonable" in the statute applies to the "cases" rather than to the points of the cases.[3]

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[1] See also the Act, Feb. 15, 1819, c. xix.

[2] 3 Kent's Com. 368; Story's Com. on the Constitution. The course of legislation on the subject of patents may be seen in the Appendix of this work.

[3] Hogg v. Emerson, 6 Howard, 439, 478.

The court there said, "It may be very proper for the court below to examine those points separately and with care, and if most of them present

questions of common law only, and not of the construction of the patent acts, and others present questions under those acts, which seem very clearly settled or trifling in their character, not to grant the writ of error at all. It might, then, well be regarded as not 'reasonable' for such questions, in a controversy too small in amount to make the writ a matter of right to persons, if standing on an equal footing with other suitors. But, we think, from the particular words used rather than otherwise, that the act intended, if the court allowed the writ as 'reasonable' at all, it must be for the whole case, or, in other words, must bring up the whole for consideration."

APPENDIX.

APPENDIX.

LAWS OF THE UNITED STATES RELATING TO PATENTS AND THE PATENT OFFICE.

CONSTITUTION OF THE UNITED STATES.

ARTICLE 1st, SECTION 8th.

"The Congress shall have power, &c., to promote the "progress of science and useful arts, by securing for lim- "ited times to Authors and Inventers the exclusive right "to their respective writings and discoveries." Also, "to make all laws which shall be necessary and proper "for carrying into execution the foregoing powers."

CHAP. VII. — AN ACT to promote the progress of useful arts.

Patents for useful discoveries, how applied for, and granted.

Repealed by the act of 21st Feb'ry, 1793, chap. 11.

The Secretary of State, the Secretary of War, and the Attorney Gen'l, or any two of them, if they shall deem the invention, &c., useful and important, to cause letters patent to be issued.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That upon the petition of any person or persons to the Secretary of State, the Secretary for the department of war, and the Attorney General of the United States, setting forth, that he, she, or they, hath or have invented or discovered any useful art, manufacture, engine, machine, or device, or any improvement therein not before known or used, and praying that a patent may be granted therefor, it shall and may be lawful, to and for the said Secretary of State, the Secretary for the department of war, and the Attorney General, or any two of them, if they shall deem the invention or discovery sufficiently useful and important, to cause letters patent to be made out in the name of the United States, to bear teste by the President of the United States, reciting the allegations and suggestions of the said petition, and describing

the said invention or discovery, clearly, truly, and fully, and thereupon granting to such petitioner or petitioners, his, her or their heirs, administrators or assigns for any term not exceeding fourteen years, the sole and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention or discovery; which letters-patent shall be delivered to the Attorney General of the United States to be examined, who shall, within fifteen days next after the delivery to him, if he shall find the same conformable to this act, certify it to be so at the foot thereof, and present the letters patent so certified to the President, who shall cause the seal of the United States to be thereto affixed, and the same shall be good and available to the grantee or grantees by force of this act, to all and every intent and purpose herein contained, and shall be recorded in a book to be kept for that purpose in the office of the Secretary of State, and delivered to the patentee or his agent, and the delivery thereof shall be entered on the record and endorsed on the patent by the said Secretary at the time of granting the same.

Continuance of a patent.

Attor'y General to certify the conformity of the patent with this act.

Patents to be recorded.

Specification in writing, with a draft or model thereof, to be deliver'd and filed in the office of the Secretary of State.

SEC. 2. *And be it further enacted*, That the grantee or grantees of each patent shall, at the time of granting the same, deliver to the Secretary of State a specification in writing, containing a description, accompanied with drafts or models, and explanations and models (if the nature of the invention or discovery will admit of a model) of the thing or things, by him or them invented or discovered, and described as aforesaid, in the said patents; which specification shall be so particular, and said models so exact, as not only to distinguish the invention or discovery from other things before known and used, but also to enable a workman or other person skilled in the art or manufacture, whereof it is a branch, or wherewith it may be nearest connected, to make, construct, or use the same, to the end that the public may have the full benefit thereof, after the expiration of the patent term; which specification shall be filed in the office of the said Secretary, and certified copies thereof, shall be competent evidence in all courts and before all jurisdictions, where any matter or thing, touching or concerning such patent, right, or privilege, shall come in question.

Certified copies, in what cases to be evidence.

Copies of specification and models may be taken.

SEC. 3. *And be it further enacted*, That upon the application of any person to the Secretary of State, for a copy of any such specification, and for permission to have similar model or models made, it shall be the duty of the Secretary to give such copy, and to permit the person so applying for a similar model or models, to take, or make, or cause the same to be taken or made, at the expense of such applicant.

Penalty for making, &c., any art, &c., for which a patent has been granted.

SEC. 4. *And be it further enacted*, That if any person or persons shall devise, make, construct, use, employ, or vend within these United States, any art, manufacture, engine, machine, or device, or any invention or improvement upon, or in any art, manufacture, engine, machine, or device, the sole and exclusive right of which shall be so as aforesaid granted by patent to any person or persons, by virtue and in pursuance of this act, without the consent of the patentee or patentees, their executors, administrators or assigns, first had and obtained in writing, every person so offending, shall forfeit and pay to the said patentee or patentees, his, her, or their executors, administrators or assigns, such damages as shall be assessed by a jury, and moreover shall forfeit to the person aggrieved the thing or things so devised, made, constructed, used, employed, or vended, contrary to the true intent of this act, which may be recovered in an action on the case founded on this act.

Damages to be assessed by a jury.

SEC. 5. *And be it further enacted*, That upon oath or affirmation made before the judge of the district court, where the defendant resides, that any patent which shall be issued in pursuance of this act, was obtained surreptitiously by, or upon false suggestion, and motion made to the said court, within one year after issuing the said patent, but not afterwards, it shall and may be lawful to and for the judge of the said district court, if the matter alleged shall appear to him to be sufficient, to grant a rule that the patentee or patentees, his, her, or their executors, administrators or assigns, show cause why process should not issue against him, her, or them, to repeal such patents; and if sufficient cause shall not be shown to the contrary, the rule shall be made absolute, and thereupon the said judge shall order process to be issued as aforesaid, against such patentee or patentees, his, her, or their executors, administrators, or assigns. And in case no

Patents surreptitiously obtained.

How to be repealed.

sufficient cause shall be shown to the contrary, or if it shall appear that the patentee was not the first and true inventor or discoverer, judgment shall be rendered by such court for the repeal of such patent or patents; and if the party at whose complaint the process issued, shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit, to be taxed by the court, and recovered in such manner as costs expended by defendants, shall be recovered in due course of law.

In actions for penalty, patents to be deemed primâ facie evidence of the first discovery; but special matter may be given in evidence; and to what effect.

SEC. 6. *And be it further enacted*, That in all actions to be brought by such patentee or patentees, his, her, or their executors, administrators or assigns, for any penalty incurred by virtue of this act, the said patents or specifications shall be *primâ facie* evidence, that the said patentee or patentees was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified, and that the same is truly specified; but that nevertheless the defendant or defendants may plead the general issue, and give this act, and any special matter whereof notice in writing shall have been given to the plaintiff, or his attorney, thirty days before the trial, in evidence, tending to prove that the specification filed by the plaintiff does not contain the whole of the truth concerning his invention or discovery; or that it contains more than is necessary to produce the effect described; and if the concealment of part, or the addition of more than is necessary, shall appear to have been intended to mislead, or shall actually mislead the public, so as the effect described cannot be produced by the means specified, then, and in such cases, the verdict and judgment shall be for the defendant.

Patent fees.

SEC. 7. *And be it further enacted*, That such patentee as aforesaid, shall, before he receives his patent, pay the following fees to the several officers employed in making out and perfecting the same, to wit: For receiving and filing the petition, fifty cents; for filing specifications, per copy-sheet containing one hundred words, ten cents; for making out patent, two dollars; for affixing great seal, one dollar; for indorsing the day of delivering the same to the patentee, including all intermediate services, twenty cents.

Approved April 10, 1790.

CHAP. IX. — AN ACT to promote the progress of useful arts, and to repeal the act heretofore made for that purpose.

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That when any person or persons, being a citizen or citizens of the United States, shall allege that he or they have invented any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement on any art, machine, manufacture or composition of matter, not known or used before the application, and shall present a petition to the Secretary of State, signifying a desire of obtaining an exclusive property in the same, and praying that a patent may be granted therefor, it shall and may be lawful for the said Secretary of State, to cause letters-patent to be made out in the name of the United States, bearing teste by the President of the United States, reciting the allegations and suggestions of the said petition, and giving a short description of the said invention or discovery, and thereupon granting to such petitioner, or petitioners, his, her, or their heirs, administrators or assigns, for a term not exceeding fourteen years, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention or discovery, which letters-patent shall be delivered to the Attorney-general of the United States, to be examined; who, within fifteen days after such delivery, if he finds the same conformable to this act, shall certify accordingly, at the foot thereof, and return the same to the Secretary of State, who shall present the letters-patent thus certified, to be signed, and shall cause the seal of the United States to be thereto affixed: and the same shall be good and available to the grantee or grantees, by force of this act, and shall be recorded in a book, to be kept for that purpose, in the office of the Secretary of State, and delivered to the patentee or his order.

Act of 1790, chap. 7.

Letters patent, how and by whom made out.

Act of April 10, 1799, ch. 33, repealed.

To bear teste by the President, and

be examined by the Attorney-general.

1800, ch. 25.

SEC. 2. *Provided always, and be it further enacted*, That any person, who shall have discovered an improvement in the principle of any machine, or in the process of any composition of matter, which have been patented,

The liberty of using an improvement defined.

and shall have obtained a patent for such improvement, he shall not be at liberty to make, use or vend the original discovery, nor shall the first inventor be at liberty to use the improvement: And it is hereby enacted and declared, that simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery.

Changing the form or proportions of any machine, &c., not to be a discovery.

How to proceed to obtain letters-patent.

SEC. 3. *And be it further enacted*, That every inventor, before he can receive a patent, shall swear or affirm, that he does verily believe, that he is the true inventor or discoverer of the art, machine, or improvement, for which he solicits a patent, which oath or affirmation may be made before any person authorized to administer oaths, and shall deliver a written description of his invention, and of the manner of using, or process of compounding the same, in such full, clear, and exact terms, as to distinguish the same from all other things before known, and to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same. And in the case of any machine, he shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions; and he shall accompany the whole with drawings and written references, where the nature of the case admits of drawings, or with specimens of the ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention is of a composition of matter; which description, signed by himself and attested by two witnesses, shall be filed in the office of the Secretary of State, and certified copies thereof shall be competent evidence in all courts, where any matter or thing, touching such patent right, shall come in question. And such inventor shall, moreover, deliver a model of his machine, provided, the Secretary shall deem such model to be necessary.

1800, ch. 25, sec. 2.

Specification.

Specification.

Inventors may assign their titles.

SEC. 4. *And be it further enacted*, That it shall be lawful for any inventor, his executor or administrator, to assign the title and interest in the said invention, at any time, and the assignee having recorded the said assignment in the office of the Secretary of State, shall thereafter stand in the place of the original inventor, both as to

Record of assignment to be made in the office of the Secretary of State.

right and responsibility, and so the assignee of assigns, to any degree.

Forfeiture on using patented inventions without leave.

SEC. 5. *And be it further enacted*, That if any person shall make, devise, and use, or sell the thing so invented, the exclusive right of which shall, as aforesaid, have been secured to any person by patent, without the consent of the patentee, his executors, administrators, or assigns, first obtained in writing, every person so offending, shall forfeit and pay to the patentee a sum, that shall be at least equal to three times the price, for which the patentee has usually sold or licensed to other persons, the use of the said invention; which may be recovered in an action on the case founded on this act, in the circuit court of the United States, or any other court having competent jurisdiction.

Three times the price to be the penalty.

How recovered.

How defendants may give this act in evidence.

SEC. 6. *Provided always, and be it further enacted*, That the defendant in such action shall be permitted to plead the general issue, and give this act and any special matter, of which notice in writing may have been given to the plaintiff, or his attorney, thirty days before trial, in evidence, tending to prove that the specification, filed by the plaintiff, does not contain the whole truth relative to his discovery, or that it contains more than is necessary to produce the described effect, which concealment or addition shall fully appear to have been made, for the purpose of deceiving the public, or that the thing, thus secured by patent, was not originally discovered by the patentee, but had been in use, or had been described in some public work anterior to the supposed discovery of the patentee, or that he had surreptitiously obtained a patent for the discovery of another person: in either of which cases, judgment shall be rendered for the defendant, with costs, and the patent shall be declared void.

And judgment shall be given.

State rights to inventions, when to be deemed void.

SEC. 7. *And be it further enacted*, That where any State, before its adoption of the present form of government, shall have granted an exclusive right to any invention, the party, claiming that right, shall not be capable of obtaining an exclusive right under this act, but on relinquishing his right under such particular State, and of such relinquishment, his obtaining an exclusive right under this act shall be sufficient evidence.

How applications depending under for-

SEC. 8. *And be it further enacted*, That the persons, whose applications for patents, were, at the time of pass-

mer law shall be prosecuted under this act.

ing this act, depending before the Secretary of State, Secretary at War, and Attorney-general, according to the act, passed the second session of the first Congress,

1790, ch. 7.

intituled "An act to promote the progress of useful arts," on complying with the conditions of this act, and paying the fees herein required, may pursue their respective claims to a patent under the same.

Proceedings to be had on interfering applications.

SEC. 9. *And be it further enacted*, That in case of interfering applications, the same shall be submitted to the arbitration of three persons, one of whom shall be chosen by each of the applicants, and the third person shall be appointed by the Secretary of State; and the decision or award of such arbitrators, delivered to the Secretary of State in writing, and subscribed by them, or any two of them shall be final, as far as respects the granting of the patent: And if either of the applicants shall refuse or fail to chuse an arbitrator, the patent shall issue to the opposite party. And where there shall be more than two interfering applications, and the parties applying shall not all unite in appointing three arbitrators, it shall be in the power of the Secretary of State to appoint three arbitrators for the purpose.

And against persons surreptitiously obtaining patents.

SEC. 10. *And be it further enacted*, That upon oath or affirmation being made before the judge of the district court, where the patentee, his executors, administrators, or assigns reside, that any patent, which shall be issued in pursuance of this act, was obtained surreptitiously, or upon false suggestion, and motion made to the said court, within three years after issuing the said patent, but not afterwards, it shall and may be lawful for the judge of the said district court, if the matter alleged shall appear to him to be sufficient, to grant a rule, that the patentee, or his executor, administrator, or assign show cause why process should not issue against him to repeal such patent. And if sufficient cause shall not be shown to the contrary, the rule shall be made absolute, and thereupon the said judge shall order process to be issued against such patentee, or his executors, administors, or assigns, with costs of suit. And in case no sufficient cause shall be shown to the contrary, or if it shall appear that the patentee was not the true inventor or discoverer, judgment shall be rendered by such court for the repeal of such patent; and if the party, at whose

Repeal of a patent illegally obtained.

complaint the process issued, shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit, to be taxed by the court, and recovered in due course of law.

Inventor, before presenting petition, to pay $30 into the treasury.

SEC. 11. *And be it further enacted*, That every inventor, before he presents his invention to the Secretary of State, signifying his desire of obtaining a patent, shall pay into the treasury thirty dollars, for which he shall take duplicate receipts; one of which receipts he shall deliver to the Secretary of State, when he presents his petition; and the money, thus paid, shall be in full for the sundry services to be performed in the office of the Secretary of State, consequent on such petition, and shall pass to the account of clerk-hire in that office. *Provided, nevertheless*, That for every copy, which may be required at the said office, of any paper respecting any patent that has been granted, the person, obtaining such copy, shall pay, at the rate of twenty cents, for every copy-sheet of one hundred words, and for every copy of a drawing, the party obtaining the same, shall pay two dollars; of which payments, an account shall be rendered, annually to the treasury of the United States, and they shall also pass to the account of clerk-hire in the office of the Secretary of State.

Copying fees.

Act of April 10, 1790, ch. 7, repealed.

SEC. 12. *And be it further enacted*, That the act, passed the tenth day of April, in the year one thousand seven hundred and ninety, intitled "An Act to promote the progress of useful arts," be, and the same is hereby repealed. *Provided always*, That nothing, contained in this act, shall be construed to invalidate any patent that may have been granted under the authority of the said act; and all patentees under the said act, their executors, administrators, and assigns, shall be considered within the purview of this act, in respect to the violation of their rights; provided, such violations shall be committed after the passing of this act.

Proviso.

Approved February 21, 1793.

CHAP. LVIII. — AN ACT supplementary to the act, intituled "An Act to promote the progress of useful arts." (Obsolete.)

Suits, &c., had under cer-

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assem-

Certain act revived.

bled, That all suits, actions, process and proceedings, heretofore had in any district court of the United States, under an act passed the tenth day of April, in the year one thousand seven hundred and ninety, intituled "An Act to promote the progress of useful arts," which may have been set aside, suspended or abated, by reason of the repeal of the said act, may be restored, at the instance of the plaintiff or defendant, within one year from and after the passing of this act, in the said courts, to the same situation, in which they may have been, when they were so set aside, suspended, or abated; and that the parties to the said suits, actions, process or proceedings, be, and are hereby intitled to proceed in such cases, as if no such repeal of the act aforesaid had taken place.

Act of Feb. 21, 1793, ch. 11.

Act of April 10, 1790, ch. 7.

In what manner.

Provided always, That before any order or proceeding, other than that for continuing the same suits, after the reinstating thereof, shall be entered or had, the defendant or plaintiff, as the case may be, against whom the same may have been reinstated, shall be brought into court by summons, attachment, or such other proceeding, as is used in other cases for compelling the appearance of a party.

Approved June 7, 1794.

CHAP. XXV. — An Act to extend the privilege of obtaining patents for useful discoveries and inventions, to certain persons therein mentioned, and to enlarge and define the penalties for violating the rights of patentees.

(Repealed.)

Aliens having resided 2 years within the U. States, entitled to the benefit of the former act.

Act of Feb. 21, 1793, ch. 11.

Section 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That all and singular the rights and privileges given, intended or provided to citizens of the United States, respecting patents for new inventions, discoveries and improvements, by the act, intituled "An Act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose," shall be, and hereby are extended and given to all aliens, who at the time of petitioning in the manner prescribed by the said act, shall have resided for two years within the United States, which privileges shall be obtained, used, and enjoyed,

by such persons, in as full and ample manner, and under the same conditions, limitations and restrictions, as by the said act is provided, and directed in the case of citizens of the United States. *Provided always*, That every person petitioning for a patent for any invention, art or discovery, pursuant to this act, shall make oath or affirmation before some person duly authorized to administer oaths before such patent shall be granted, that such invention, art or discovery hath not, to the best of his or her knowledge or belief, been known or used either in this or any foreign country, and that every patent which shall be obtained pursuant to this act, for any invention, art or discovery which it shall afterwards appear had been known or used previous to such application for a patent shall be utterly void.

Oath to be taken by such resident, that the invention or discovery hath not been used.

SEC. 2. *And be it further enacted*, That where any person hath made, or shall have made, any new invention, discovery or improvement on account of which a patent might, by virtue of this or the above-mentioned act, be granted to such person, and shall die before any patent shall be granted therefor, the right of applying for and obtaining such patent, shall devolve on the legal representatives of such person in trust for the heirs at law of the deceased, in case he shall have died intestate; but if otherwise, then in trust for his devisees, in as full and ample manner, and under the same conditions, limitations and restrictions, as the same was held or might have been claimed or enjoyed by such person, in his or her lifetime; and when application for a patent shall be made by such legal representatives, the oath or affirmation, provided in the third section of the before-mentioned act, shall be so varied as to be applicable to them.

The legal representatives of a deceased inventor may obtain a patent.

SEC. 3. *And be it further enacted*, That where any patent shall be or shall have been granted pursuant to this or the above-mentioned act, and any person without the consent of the patentee, his or her executors, administrators or assigns first obtained in writing, shall make, devise, use, or sell the thing whereof the exclusive right is secured to the said patentee by such patent, such person so offending, shall forfeit and pay to the said patentee, his executors, administrators or assigns, a sum equal to three times the actual damage sustained by such paten-

Damages for breach of patent right.

tee, his executors, administrators or assigns, from or by reason of such offence, which sum shall and may be recovered, by action on the case founded on this and the above-mentioned act, in the circuit court of the United States, having jurisdiction thereof.

To be recovered by action on the case in the circuit court.

SEC. 4. *And be it further enacted*, That the fifth section of the above-mentioned act, intituled "An Act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose," shall be and hereby is repealed.

Repeal of part of the former act.

Act of Feb. 21, 1793, ch. 11.

Approved April 17, 1800.

CHAP. XIX. — AN ACT to extend the jurisdiction of the circuit courts of the United States to cases arising under the law relating to patents.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the circuit courts of the United States shall have original cognisance, as well in equity as at law, of all actions, suits, controversies, and cases, arising under any law of the United States, granting or confirming to authors or inventors, the exclusive right to their respective writings, inventions, and discoveries: and upon any bill in equity, filed by any party aggrieved in any such cases, shall have authority to grant injunctions, according to the course and principles of courts of equity, to prevent the violation of the rights of any authors or inventors, secured to them by any laws of the United States, on such terms and conditions as the said courts may deem fit and reasonable: *Provided, however*, That from all judgments and decrees of any circuit courts, rendered in the premises, a writ of error or appeal, as the case may require, shall lie to the Supreme Court of the United States, in the same manner, and under the same circumstances, as is now provided by law in other judgments and decrees of such circuit courts.

The circuit courts to have original cognisance in equity and at law, in controversies respecting the right to inventions and writings.

Act of Feb. 21, 1793, ch. 11.

Act of May 31, 1790, ch. 15.

Proviso.

Approved February 15, 1819.

CHAP. CLXII.—AN ACT concerning patents for useful inventions.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be the duty of the Secretary of State, annually, in the month of January, to report to Congress, and to publish in two of the newspapers printed in the city of Washington, a list of all the patents for discoveries, inventions and improvements, which shall have expired within the year immediately preceding, with the names of the patentees, alphabetically arranged. Act of July 4, 1836, chap. 357. List of expired patents to be annually reported to Congress.

SEC. 2. *And be it further enacted*, That application to Congress to prolong or renew the term of a patent, shall be made before its expiration, and shall be notified at least once a month, for three months before its presentation, in two newspapers printed in the city of Washington, and in one of the newspapers in which the laws of the United States shall be published in the State or territory in which the patentee shall reside. The petition shall set forth particularly the grounds of the application. It shall be verified by oath; the evidence in its support may be taken before any judge or justice of the peace; it shall be accompanied by a statement of the ascertained value of the discovery, invention, or improvement, and of the receipts and expenditures of the patentee, so as to exhibit the profit or loss arising therefrom. Form of application to prolong or renew patent.

SEC. 3. *And be it further enacted*, That wherever any patent which has been heretofore, or shall be hereafter, granted to any inventor in pursuance of the act of Congress, entitled "An act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose," passed on the twenty-first day of February, in the year of our Lord, one thousand seven hundred and ninety-three, or of any of the acts supplementary thereto, shall be invalid or inoperative, by reason that any of the terms or conditions prescribed in the third section of the said first mentioned act, have not, by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, been complied with on the part of the said inventor, it shall be lawful for the Secretary of State, upon the surrender to him of such patent, to cause a new patent to be granted to the said inventor for the same invention for the Patent to be invalid in case of inventor not having complied with the terms, &c. 1793, ch. 11. Secretary of State, upon surrender, &c. to grant a new patent.

residue of the period then unexpired, for which the original patent was granted, upon his compliance with the terms and conditions prescribed in the said third section of the said act. And, in case of his death, or any assignment by him made of the same patent, the like right shall vest in his executors and administrators, or assignee or assignees: *Provided, however*, That such new patent, so granted, shall, in all respects, be liable to the same matters of objection and defence, as any original patent granted under the said first mentioned act. But no public use or privilege of the invention so patented, derived from or after the grant of the original patent, either under any special license of the inventor, or without the consent of the patentee that there shall be a free public use thereof, shall, in any manner, prejudice his right of recovery for any use or violation of his invention after the grant of such new patent as aforesaid.

In case of death, &c., right to vest, in executors, &c.

Proviso.

Approved July 3, 1832.

CHAP. CCIII. — An Act concerning the issuing of patents to aliens, for useful discoveries and inventions.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the privileges granted to the aliens described in the first section of the act, to extend the privilege of obtaining patents for useful discoveries and inventions to certain persons therein mentioned, and to enlarge and define the penalties for violating the rights of patentees, approved April seventeenth, eighteen hundred, be extended, in like manner, to every alien, who, at the time of petitioning for a patent, shall be resident in the United States, and shall have declared his intention, according to law, to become a citizen thereof: *Provided*, That every patent granted by virtue of this act, and the privileges thereto appertaining, shall cease and determine and become absolutely void without resort to any legal process to annul or cancel the same in case of a failure on the part of any patentee, for the space of one year from the issuing thereof, to introduce into public use in the United States the invention or improvement for which the patent shall be issued; or in case the same for any period of six

The privileges granted to aliens extended.

Act of April 17, 1800, ch. 25.

Proviso.

months after such introduction shall not continue to be publicly used and applied in the United States, or in case of failure to become a citizen of the United States, agreeably to notice given at the earliest period within which he shall be entitled to become a citizen of the United States.

Approved July 13, 1832.

CHAP. CCCLVII. — AN ACT to promote the progress of the useful arts, and to repeal all acts and parts of acts heretofore made for that purpose.

March 3, 1837, ch. 43.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established and attached to the Department of State an office to be denominated the Patent Office, the chief officer of which shall be called the Commissioner of Patents, to be appointed by the President, by and with the advice and consent of the Senate, whose duty it shall be, under the direction of the Secretary of State, to superintend, execute, and perform all such acts and things touching and respecting the granting and issuing of patents for new and useful discoveries, inventions, and improvements, as are herein provided for, or shall hereafter be, by law, directed to be done and performed, and shall have the charge and custody of all the books, records, papers, models, machines, and all other things belonging to said office. And said Commissioner shall receive the same compensation as is allowed by law to the Commissioner of the Indian Department, and shall be entitled to send and receive letters and packages by mail, relating to the business of the office, free of postage.

Commissioner of Patents to be appointed, and his duties. August 29, 1842, ch. 263.

Chief clerk.

SEC. 2. *And be it further enacted*, That there shall be in said office an inferior officer, to be appointed by the said principal officer, with the approval of the Secretary of State, to receive an annual salary of seventeen hundred dollars, and to be called the chief clerk of the Patent Office, who, in all cases during the necessary absence of the Commissioner, or when the said principal office shall become vacant, shall have the charge and custody of the seal, and of the records, books, papers,

machines, models, and all other things, belonging to the said office, and shall perform the duties of Commissioner during such vacancy. And the said Commissioner may also, with like approval, appoint an examining clerk, at an annual salary of fifteen hundred dollars; two other clerks, at twelve hundred dollars each, one of whom shall be a competent draughtsman; one other clerk, at one thousand dollars; a machinist, at twelve hundred and fifty dollars; and a messenger, at seven hundred dollars. And said Commissioner, clerks, and every other person appointed and employed in said office, shall be disqualified and interdicted from acquiring or taking, except by inheritance, during the period for which they shall hold their appointments, respectively, any right or interest, directly or indirectly, in any patent for an invention or discovery which has been, or may hereafter be, granted.

Examining clerk, & other officers.

Officers to make oath &c.

SEC. 3. *And be it further enacted*, That the said principal officer, and every other person to be appointed in the said office, shall, before he enters upon the duties of his office or appointment, make oath or affirmation truly and faithfully to execute the trust committed to him. And the said Commissioner and the chief clerk shall also, before entering upon their duties, severally give bonds, with sureties, to the Treasurer of the United States, the former in the sum of ten thousand dollars and the latter in the sum of five thousand dollars, with condition to render a true and faithful account to him or his successor in office, quarterly, of all moneys which shall be by them respectively received for duties on patents, and for copies of records and drawings, and all other moneys received by virtue of said office.

A seal to be provided.

SEC. 4. *And be it further enacted*, That the said Commissioner shall cause a seal to be made and provided for the said office, with such device as the President of the United States shall approve; and copies of any records, books, papers, or drawings, belonging to the said office, under the signature of the said Commissioner, or, when the office shall be vacant, under the signature of the chief clerk, with the said seal affixed, shall be competent evidence in all cases in which the original records, books, papers, or drawings, could be evidence. And any person making application therefor may have certified

copies of the records, drawings, and other papers deposited in said office, on paying, for the written copies, the sum of ten cents for every page of one hundred words; and for copies of drawings, the reasonable expense of making the same.

Patents to be signed by the Secretary of State and by the Commissioner.

SEC. 5. *And be it further enacted*, That all patents issued from said office shall be issued in the name of the United States, and under the seal of said office, and be signed by the Secretary of State, and countersigned by the Commissioner of the said office, and shall be recorded, together with the descriptions, specifications, and drawings, in the said office, in books to be kept for that purpose. Every such patent shall contain a short description or title of the invention or discovery, correctly indicating its nature and design, and in its terms grant to the applicant or applicants, his or their heirs, administrators, executors, or assigns, for a term not exceeding fourteen years, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention or discovery, referring to the specifications for the particulars thereof, a copy of which shall be annexed to the patent, specifying what the patentee claims as his invention or discovery.

Applications, how made.

SEC. 6. *And be it further enacted*, That any person or persons having discovered or invented any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements on any art, machine, manufacture, or composition of matter not known or used by others before his or their discovery or invention thereof, and not, at the time of his application for a patent, in public use or on sale, with his consent or allowance, as the inventor or discoverer, and shall desire to obtain an exclusive property therein, may make application in writing, to the Commissioner of Patents, expressing such desire, and the Commissioner, on due proceedings had, may grant a patent therefor. But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his inventien or discovery, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which

Specification.

it appertains, or with which it is most nearly connected, to make, construct, compound and use the same; and in case of any machine, he shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery. He shall, furthermore, accompany the whole with a drawing or drawings, and written references, where the nature of the case admits of drawings; or with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention or discovery is of a composition of matter; which descriptions and drawings, signed by the inventor, and attested by two witnesses, shall be filed in the Patent Office; and he shall, moreover, furnish a model of his invention, in all cases which admit of a representation by model, of a convenient size to exhibit advantageously its several parts. The applicant shall also make oath, or affirmation, that he does verily believe that he is the original and first inventor or discoverer of the art, machine, composition, or improvement, for which he solicits a patent; and that he does not know or believe that the same was ever before known or used; and also of what country he is a citizen; which oath or affirmation may be made before any person authorized by law to administer oaths.

Drawings, &c.

Models.

Oath or affirmation.

Examination of invention, to be made, and proceedings thereon, should it not be deemed new.

SEC. 7. *And be it further enacted*, That, on the filing of any such application, description, and specification, and the payment of the duty hereinafter provided, the Commissioner shall make, or cause to be made, an examination of the alleged new invention or discovery; and if, on any such examination, it shall not appear to the Commissioner that the same had been invented or discovered by any other person in this country, prior to the alleged invention or discovery thereof by the applicant, or that it had been patented or described in any printed publication in this or any foreign country, or had been in public use or on sale, with the applicant's consent or allowance, prior to the application, if the Commissioner shall deem it to be sufficiently useful and important, it shall be his duty to issue a patent therefor. But when-

ever, on such examination, it shall appear to the Commissioner that the applicant was not the original and first inventor or discoverer thereof, or that any part of that which is claimed as new had before been invented or discovered, or patented, or described in any printed publication in this or any foreign country as aforesaid, or that the description is defective and insufficient, he shall notify the applicant thereof, giving him briefly such information and references as may be useful in judging of the propriety of renewing his application, or of altering his specification to embrace only that part of the invention or discovery which is new. In every such case, if the applicant shall elect to withdraw his application, relinquishing his claim to the model, he shall be entitled to receive back twenty dollars, part of the duty required by this act, on filing a notice in writing of such election in the Patent Office; a copy of which, certified by the Commissioner, shall be a sufficient warrant to the treasurer for paying back to the said applicant, the said sum of twenty dollars. But if the applicant, in such case shall persist in his claims for a patent, with or without any alteration of his specification, he shall be required to make oath or affirmation anew, in manner as aforesaid; and if the specification and claim shall not have been so modified as, in the opinion of the Commissioner, shall entitle the applicant to a patent, he may, on appeal, and upon request in writing, have the decision of a board of examiners, to be composed of three disinterested persons, who shall be appointed for that purpose by the Secretary of State, one of whom, at least, to be selected, if practicable and convenient, for his knowledge and skill in the particular art, manufacture, or branch of science to which the alleged invention appertains; who shall be under oath or affirmation for the faithful and impartial performance of the duty imposed upon them by said appointment. Said board shall be furnished with a certificate in writing of the opinion and decision of the Commissioner, stating the particular grounds of his objection, and the part or parts of the invention which he considers as not entitled to be patented. And the said board shall give reasonable notice to the applicant, as well as to the Commissioner, of the time and place of their meeting, that they may have an opportunity of furnishing them

with such facts and evidence as they may deem necessary to a just decision; and it shall be the duty of the Commissioner to furnish to the board of examiners such information as he may possess relative to the matter under their consideration. And on an examination and consideration of the matter by such board, it shall be in their power, or of a majority of them, to reverse the decision of the Commissioner, either in whole or in part; and their opinion being certified to the Commissioner, he shall be governed thereby in the further proceedings to be had on such application: *Provided, however*, That, before a board shall be instituted in any such case, the applicant shall pay to the credit of the treasury, as provided in the ninth section of this act, the sum of twenty-five dollars; and each of said persons so appointed shall be entitled to receive, for his services, in each case, a sum not exceeding ten dollars, to be determined and paid by the Commissioner out of any moneys in his hands, which shall be in full compensation to the persons who may be so appointed, for their examination and certificate as aforesaid.

Proviso.

Interfering applications.

SEC. 8. *And be it further enacted*, That whenever an application shall be made for a patent, which, in the opinion of the Commissioner, would interfere with any other patent for which an application may be pending, or with any unexpired patent which shall have been granted, it shall be the duty of the Commissioner to give notice thereof to such applicants, or patentees, as the case may be; and if either shall be dissatisfied with the decision of the Commissioner on the question of priority of right or invention, on a hearing thereof, he may appeal from such decision, on the like terms and conditions as are provided in the preceding section of this act, and the like proceedings shall be had to determine which, or whether either, of the applicants is entitled to receive a patent as prayed for. But nothing in this act contained shall be construed to deprive an original and true inventor of the right to a patent for his invention, by reason of his having previously taken out letters-patent therefor in a foreign country, and the same having been published, at any time within six months next preceding the filing of his specification and drawings. And whenever the applicant shall request it, the patent shall take

date from the time of filing of the specifications and drawings, not, however, exceeding six months prior to the actual issuing of the patent; and on like request, and the payment of the duty herein required, by any applicant, his specification and drawings shall be filed in the secret archives of the office, until he shall furnish the model, and the patent be issued, not exceeding the term of one year, the applicant being entitled to notice of interfering applications.

Thirty dollars to be paid to the credit of the United States treasurer by a citizen, or, &c.

SEC. 9. *And be it further enacted*, That before any application for a patent shall be considered by the Commissioner as aforesaid, the applicant shall pay into the Treasury of the United States, or into the Patent Office, or into any of the deposit banks, to the credit of the treasury, if he be a citizen in the United States, or an alien, and shall have been resident in the United States for one year next preceding, and shall have made oath of his intention to become a citizen thereof, the sum of thirty dollars; if a subject of the King of Great Britain, the sum of five hundred dollars; and all other persons the sum of three hundred dollars; for which payment duplicate receipts shall be taken, one of which to be filed in the office of the treasurer. And the moneys received into the treasury under this act shall constitute a fund for the payment of the salaries of the officers and clerks herein provided for, and all other expenses of the Patent Office, and to be called the patent fund.

Five hundred dollars by a subject of G. Britain, and three hundred by other persons.

Inventors dying without taking a patent, their executors, &c., may, &c.

SEC. 10. *And be it further enacted*, That where any person hath made, or shall have made, any new invention, discovery, or improvement, on account of which a patent might by virtue of this act be granted, and such person shall die before any patent shall be granted therefor, the right of applying for and obtaining such patent shall devolve on the executor or administrator of such person, in trust for the heirs-at-law of the deceased, in case he shall have died intestate; but if otherwise, then in trust for his devisees, in as full and ample manner, and under the same conditions, limitations, and restrictions as the same was held, or might have been claimed or enjoyed by such person in his or her lifetime; and when application for a patent shall be made by such legal representatives, the oath or affirmation provided in the sixth section of this act shall be so varied as to be applicable to them.

Assignment of a patent, and record thereof.

SEC. 11. *And be it further enacted*, That every patent shall be assignable in law, either as to the whole interest, or any undivided part thereof, by any instrument in writing; which assignment, and also every grant and conveyance of the exclusive right under any patent, to make and use, and to grant to others to make and use, the thing patented within and throughout any specified part or portion of the United States, shall be recorded in the Patent Office within three months from the execution thereof, for which the assignee or grantee shall pay to the Commissioner the sum of three dollars.

Caveat may be entered.

SEC. 12. *And be it further enacted*, That any citizen of the United States, or alien, who shall have been a resident of the United States one year next preceding, and shall have made oath of his intention to become a citizen thereof, who shall have invented any new art, machine, or improvement thereof, and shall desire further time to mature the same, may, on paying to the credit of the treasury, in manner as provided in the ninth section of this act, the sum of twenty dollars, file in the Patent Office a caveat setting forth the design and purpose thereof, and its principal and distinguishing characteristics, and praying protection of his right, till he shall have matured his invention; which sum of twenty dollars, in case the person filing such caveat shall afterwards take out a patent for the invention therein mentioned, shall be considered a part of the sum herein required for the same. And such caveat shall be filed in the confidential archives of the office, and preserved in secresy. And if application shall be made by any other person, within one year from the time of filing such caveat, for a patent of any invention with which it may in any respect interfere, it shall be the duty of the Commissioner to deposit the description, specifications, drawings, and model, in the confidential archives of the office, and to give notice (by mail) to the person filing the caveat of such application, who shall, within three months after receiving the notice, if he would avail himself of the benefit of his cavent, file his description, specification, drawings, and model; and if, in the opinion of the Commissioner, the specifications of claim interfere with each other, like proceedings may be had in all respects as are in this act provided in the

case of interfering applications. *Provided, however,* That no opinion or decision of any board of examiners, under the provisions of this act, shall preclude any person interested in favor of or against the validity of any patent which has been or may hereafter be granted, from the right to contest the same in any judicial court, in any action in which its validity may come in question. Proviso.

Patents invalid from defective specifications may be surrendered, and new patents may be issued in certain cases.

SEC. 13. *And be it further enacted,* That whenever any patent, which has heretofore been granted, or which shall hereafter be granted, shall be inoperative or invalid, by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specification, as his own invention, more than he had or shall have a right to claim as new, if the error has or shall have arisen by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention, it shall be lawful for the Commissioner, upon the surrender to him of such patent, and the payment of the further duty of fifteen dollars, to cause a new patent to be issued to the said inventor for the same invention, for the residue of the period then unexpired, for which the original patent was granted, in accordance with the patentee's corrected description and specification. And in case of his death, or any assignment by him made of the original patent, a similar right shall vest in his executors, administrators, or assignees. And the patent so reissued, together with the corrected description and specifications, shall have the same effect and operation in law, on the trial of all actions hereafter commenced for causes subsequently accruing, as though the same had been originally filed in such corrected form, before the issuing of the original patent. And whenever the original patentee shall be desirous of adding the description and specification of any new improvement of the original invention or discovery, which shall have been invented or discovered by him subsequent to the date of his patent, he may, like proceedings being had in all respects as in the case of original applications, and on the payment of fifteen dollars, as hereinbefore provided, have the same annexed to the original description and specification; and the commissioner shall certify, on the margin of such annexed description and specification, the

Patentee may make additions to his patent.

time of its being annexed and recorded; and the same shall thereafter have the same effect in law, to all intents and purposes, as though it had been embraced in the original description and specification.

Courts may render judgment for a sum not exceeding three times the am't of actual damages.

SEC. 14. *And be it further enacted*, That whenever, in any action for damages [for] making, using, or selling the thing whereof the exclusive right is secured by any patent heretofore granted, or by any patent which may hereafter be granted, a verdict shall be rendered for the plaintiff in such action, it shall be in the power of the court to render judgment of any sum above the amount found by such verdict as the actual damages sustained by the plaintiff, not exceeding three times the amount thereof, according to the circumstances of the case, with costs; and such damages may be recovered by action on the case, in any court of competent jurisdiction, to be brought in the name or names of th· ›erson or persons interested, whether as patentee, assignees, or as grantees of the exclusive right within and throughout a specified part of the United States.

Defendant may plead the general issue, &c.

SEC. 15. *And be it further enacted*, That the defendant in any such action shall be permitted to plead the general issue, and to give this act and any special matter in evidence, of which notice in writing may have been given to the plaintiff or his attorney, thirty days before trial, tending to prove that the description and specification filed by the plaintiff, does not contain the whole truth relative to his invention or discovery, or that it contains more than is necessary to produce the described effect; which concealment or addition shall fully appear to have been made for the purpose of deceiving the public, or that the patentee was not the original and first inventor or discoverer of the thing patented, or of a substantial and material part thereof claimed as new, or that it had been described in some public work anterior to the supposed discovery thereof by the patentee, or had been in public use or on sale with the consent and allowance of the patentee before his application for a patent, or that he had surreptitiously or unjustly obtained the patent for that which was in fact invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same; or that the patentee, if an alien at the time the patent was granted, had failed and neglected,

for the space of eighteen months from the date of the patent, to put and continue on sale to the public, on reasonable terms, the invention or discovery for which the patent issued; and whenever the defendant relies in his defence on the fact of a previous invention, knowledge, or use of the thing patented, he shall state, in his notice of special matter the names and places of residence of those whom he intends to prove to have possessed a prior knowledge of the thing and where the same had been used; in either of which cases, judgment shall be rendered for the defendant, with costs: *Provided, however*, That whenever it shall satisfactorily appear that the patentee, at the time of making his application for the patent believed himself to be the first inventor or discoverer of the thing patented, the same shall not be void on account of the invention or discovery, or any part thereof, having been before known or used in any foreign country; it not appearing that the same, or any substantial part thereof, had before been patented or described in any printed publication; *And provided, also*, That whenever the plaintiff shall fail to sustain his action on the ground that in his specification or claim is embraced more than that of which he was the first inventor, if it shall appear that the defendant had used or violated any part of the invention justly and truly specified and claimed as new, it shall be in the power of the court to adjudge and award, as to costs as may appear to be just and equitable.

Proviso.

Proviso.

Interfering patents, &c.

SEC. 16. *And be it further enacted*, That whenever there shall be two interfering patents, or whenever a patent or application shall have been refused on an adverse decision of a board of examiners, on the ground that the patent applied for would interfere with an unexpired patent previously granted, any person interested in any such patent, either by assignment or otherwise in the one case, and any such applicant in the other case, may have remedy by bill in equity; and the court having cognizance thereof, on notice to adverse parties, and other due proceedings had, may adjudge and declare either the patents void in the whole or in part, or inoperative and invalid in any particular part or portion of the United States, according to the interest which the parties to such suit may possess in the patent or the

inventions patented, and may also adjudge that such applicant is entitled, according to the principles and provisions of this act, to have and receive a patent for his invention, as specified in his claim, or for any part thereof, as the fact of priority of right or invention shall, in any such case, be made to appear. And such adjudication, if it be in favor of the right of such applicant, shall authorize the Commissioner to issue such patent on his filing a copy of the adjudication, and otherwise complying with the requisitions of this act: Proviso. *Provided, however*, That no such judgment or adjudication shall affect the rights of any person, except the parties to the action, and those deriving title from or under them subsequent to the rendition of such judgment.

Actions cognizable in circuit courts of the U. S., &c.

SEC. 17. *And be it further enacted*, That all actions, suits, controversies, and cases arising under any law of the United States, granting or confirming to inventors the exclusive right to their inventions or discoveries, shall be originally cognizable, as well in equity as at law, by the circuit courts of the United States, or any district court having the powers and jurisdiction of a circuit court; which courts shall have power, upon a bill in equity filed by any party aggrieved, in any such case, to grant injunctions, according to the course and principles of courts of equity, to prevent the violation of the rights of any inventor as secured to him by any law of the United States, on such terms and conditions as said courts may deem reasonable: Proviso. *Provided, however*, That from all judgments and decrees from any such court rendered in the premises, a writ of error or appeal, as the case may require, shall lie to the Supreme Court of the United States, in the same manner, and under the same circumstances, as is now provided by law in other judgments and decrees of circuit courts, and in all other cases in which the court shall deem it reasonable to allow the same.

Patents may be extended seven years in certain cases.

SEC. 18. *And be it further enacted*, That whenever any patentee of an invention or discovery shall desire an extension of his patent beyond the term of its limitation, he may make application therefor, in writing, to the Commissioner of the Patent Office, setting forth the grounds thereof; and the Commissioner shall, on the

applicant's paying the sum of forty dollars to the credit of the treasury, as in the case of an original application for a patent, cause to be published in one or more of the principal newspapers in the city of Washington, and in such other paper or papers as he may deem proper, published in the section of country most interested adversely to the extension of the patent, a notice of such application, and of the time and place when and where the same will be considered, that any person may appear and show cause why the extension should not be granted. And the Secretary of State, the Commissioner of the Patent Office, and the Solicitor of the Treasury, shall constitute a board to hear and decide upon the evidence produced before them, both for and against the extension, and shall sit for that purpose at the time and place designated in the published notice thereof. The patentee shall furnish to said board a statement, in writing, under oath, of the ascertained value of the invention, and of his receipts and expenditures, sufficiently in detail to exhibit a true and faithful account of loss and profit in any manner accruing to him from and by reason of said invention. And if, upon a hearing of the matter, it shall appear to the full and entire satisfaction of said board, having due regard to the public interest therein, that it is just and proper that the term of the patent should be extended, by reason of the patentee, without neglect or fault on his part, having failed to obtain, from the use and sale of his invention, a reasonable remuneration for the time, ingenuity, and expense bestowed upon the same, and the introduction thereof into use, it shall be the duty of the Commissioner to renew and extend the patent, by making a certificate thereon of such extension, for the term of seven years from and after the expiration of the first term; which certificate, with a certificate of said board of their judgment and opinion as aforesaid, shall be entered on record in the Patent Office; and thereupon the said patent shall have the same effect in law as though it had been originally granted for the term of twenty-one years; and the benefit of such renewal shall extend to assignees and grantees of the right to use the thing patented, to the extent of their respective interests therein: *Provided, however*, That no extension of a patent shall be granted after the expiration of the term for which it was originally issued. Proviso.

Library of Patent Office.

SEC. 19. *And be it further enacted*, That there shall be provided, for the use of said office, a library of scientific works and periodical publications, both foreign and American, calculated to facilitate the discharge of the duties hereby required of the chief officers therein, to be purchased under the direction of the Committee of the Library of Congress. And the sum of fifteen hundred dollars is hereby appropriated for that purpose, to be paid out of the patent fund.

Models to be classified and arranged.

SEC. 20. *And be it further enacted*, That it shall be the duty of the Commissioner to cause to be classified and arranged, in such rooms or galleries as may be provided for that purpose, in suitable cases, when necessary for their preservation, and in such manner as shall be conducive to a beneficial and favorable display thereof, the models and specimens of compositions and of fabrics, and other manufactures and works of art, patented or unpatented, which have been, or shall hereafter be deposited in said office. And said rooms or galleries shall be kept open during suitable hours for public inspection.

Former acts repealed.

SEC. 21. *And be it further enacted*, That all acts and parts of acts heretofore passed on this subject be, and the same are hereby, repealed: *Provided, however*, That all actions and processes in law or equity sued out prior to the passage of this act, may be prosecuted to final judgment and execution, in the same manner as though this act had not been passed, excepting and saving the application to any such action of the provisions of the fourteenth and fifteenth sections of this act, so far as they may be applicable thereto: *And provided, also*, That all applications for petitions for patents, pending at the time of the passage of this act, in cases where the duty has been paid, shall be proceeded with and acted on in the same manner as though filed after the passage thereof.

Proviso.

Proviso.

JAMES K. POLK,
Speaker of the House of Representatives.

W. R. KING,
President of the Senate, pro tempore.

Approved July 4, 1836.

ANDREW JACKSON.

CHAP. XLV. — AN ACT in addition to the act to promote the progress of science and useful arts.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any person who may be in possession of, or in any way interested in, any patent for an invention, discovery, or improvement, issued prior to the fifteenth day of December, in the year of our Lord one thousand eight hundred and thirty-six, or in an assignment of any patent, or interest therein, executed and recorded prior to the said fifteenth day of December, may, without charge, on presentation, or transmission thereof to the Commissioner of Patents, have the same recorded anew in the Patent Office, together with the descriptions, specifications of claim, and drawings annexed or belonging to the same; and it shall be the duty of the Commissioner to cause the same, or any authenticated copy of the original record, specification, or drawing, which he may obtain, to be transcribed and copied into books of record to be kept for that purpose; and wherever a drawing was not originally annexed to the patent and referred to in the specification, any drawing produced as a delineation of the invention, being verified by oath in such manner as the Commissioner shall require, may be transmitted and placed on file, or copied as aforesaid, together with certificate of the oath; or such drawings may be made in the office, under the direction of the Commissioner, in conformity with the specification. And it shall be the duty of the Commissioner to take such measures as may be advised and determined by the board of Commissioners provided for in the fourth section of this act, to obtain the patents, specifications, and copies aforesaid, for the purpose of being so transcribed and recorded. And it shall be the duty of each of the several clerks of the judicial courts of the United States to transmit, as soon as may be, to the Commissioner of the Patent Office, a statement of all the authenticated copies of patents, descriptions, specifications, and drawings of inventions and discoveries made and executed prior to the aforesaid fifteenth day of December, which may be found on the files of his office; and also to make out and

Patents issued, and assignments executed and recorded prior to 15th December, 1836, may be recorded anew, &c.

Measures to be taken to obtain patents, &c., to be recorded, &c.

Clerks of the judicial courts of U. States to transmit statements of authenticated copies of patents, &c., prior to 15th December, 1836, &c.

transmit to said Commissioner, for record as aforesaid, a certified copy of every such patent, description, specification, or drawing, which shall be specially required by said Commissioner.

Certified copies of such record, &c., to be evidence in any judicial court of U. S., &c.

SEC. 2. *And be it further enacted*, That copies of such record and drawings, certified by the Commissioner, or, in his absence, by the chief clerk, shall be primâ facie evidence of the particulars of the invention and of the patent granted therefor in any judicial court of the United States, in all cases where copies of the original record or specification and drawings would be evidence, without proof of the loss of such originals; and no patent issued prior to the aforesaid fifteenth day of December shall, after the first day of June next, be received in evidence in any of the said courts in behalf of the patentee or other person who shall be in possession of the same, unless it shall have been so recorded anew, and a drawing of the invention, if separate from the patent, verified as aforesaid, deposited in the Patent Office; nor shall any written assignment of any such patent, executed and recorded prior to the said fifteenth day of December, be received in evidence in any of the said courts in behalf of the assignee or other person in possession thereof, until it shall have been so recorded anew.

No patent, &c., issued, &c, prior to December 15, 1836, to be received in evidence in said courts, after 1st June next, unless recorded anew.

New patents to be issued for those lost or destroyed on or before December 15, 1836.

SEC. 3. *And be it further enacted*, That, whenever it shall appear to the Commissioner that any patent was destroyed by the burning of the Patent Office building on the aforesaid fifteenth day of December, or was otherwise lost prior thereto, it shall be his duty, on application therefor by the patentee or other person interested therein, to issue a new patent for the same invention or discovery, bearing the date of the original patent, with his certificate thereon, that it was made and issued pursuant to the provisions of the third section of this act, and shall enter the same of record: *Provided, however*, That before such patent shall be issued, the applicant therefor shall deposit in the Patent Office a duplicate, as near as may be, of the original model, drawings, and descriptions, with specifications of the invention or discovery, verified by oath, as shall be required by the Commissioner; and such patent and copies of such drawings and descriptions, duly certified, shall be admissible

Proviso.

as evidence in any judicial court of the United States, and shall protect the rights of the patentee, his administrators, heirs, and assigns, to the extent only in which they would have been protected by the original patent and specification.

Duplicates of certain models to be procured.

SEC. 4. *And be it further enacted*, That it shall be the duty of the Commissioner to procure a duplicate of such of the models destroyed by fire on the aforesaid fifteenth day of December, as were most valuable and interesting, and whose preservation would be important to the public; and such as would be necessary to facilitate the just discharge of the duties imposed by law on the Commissioner in issuing patents, and to protect the rights of the public and of patentees in patented inventions and improvements: *Provided*, That a duplicate of such models may be obtained at a reasonable expense: *And provided, also*, That the whole amount of expenditure for this purpose shall not exceed the sum of one hundred thousand dollars. And there shall be a temporary board of Commissioners, to be composed of the Commissioner of the Patent Office and two other persons to be appointed by the President, whose duty it shall be to consider and determine upon the best and most judicious mode of obtaining models of suitable construction; and, also, to consider and determine what models may be procured in pursuance of, and in accordance with, the provisions and limitations in this section contained. And said Commissioners may make and establish all such regulations, terms, and conditions, not inconsistent with law, as in their opinion may be proper and necessary to carry the provisions of this section into effect, according to its true intent.

Proviso.

Further proviso.

A temporary board of commissioners to be appointed; their duties.

Patents returned for correction, &c., under the 13th section of the act to which this is additional, &c.

SEC. 5. *And be it further enacted*, That, whenever a patent shall be returned for correction and reissue, under the thirteenth section of the act to which this is additional, and the patentee shall desire several patents to be issued for distinct and separate parts of the thing patented, he shall first pay, in manner and in addition to the sum provided by that act, the sum of thirty dollars for each additional patent so to be issued: *Provided, however*, That no patent made prior to the aforesaid fifteenth day of December, shall be corrected and reissued until a duplicate of the model and drawing of the thing, as origi-

Act of 1836, ch. 357.

Proviso.

nally invented, verified by oath as shall be required by the Commissioner, shall be deposited in the Patent Office.

No addition &c., to be made to any patent heretofore granted &c., until a verified duplicate model, &c., is deposited, &c.

Nor shall any addition of an improvement be made to any patent heretofore granted, nor any new patent be issued for an improvement made in any machine, manufacture, or process, to the original inventor, assignee, or possessor, of a patent therefor, nor any disclaimer be admitted to record, until a duplicate model and drawing of the thing originally invented, verified as aforesaid, shall have been deposited in the Patent Office, if the Commissioner shall require the same; nor shall any patent be granted for an invention, improvement, or discovery, the model or drawing of which shall have been lost, until another model and drawing, if required by the Commissioner, shall, in like manner, be deposited in the Patent Office. And in all such cases, as well as in those which may arise under the third section of this act, the question of compensation for such models and drawing, shall be subject to the judgment and decision of the Commissioners provided for in the fourth section, under the same limitations and restrictions as are therein prescribed.

Compensation for models, &c.

Patents hereafter to be issued.

SEC. 6. *And be it further enacted*, That any patent hereafter to be issued, may be made and issued to the assignee or assignees of the inventor or discoverer, the assignment thereof being first entered of record, and the application therefor being duly made, and the specification duly sworn to by the inventor. And in all cases hereafter, the applicant for a patent shall be held to furnish duplicate drawings, whenever the case admits of drawings, one of which to be deposited in the office, and the other to be annexed to the patent, and considered a part of the specification.

Whenever any patentee shall, through inadvertence, &c., make his specification too broad, &c. he, &c., may make disclaimer, &c.

SEC. 7. *And be it further enacted*, That whenever any patentee shall have, through inadvertence, accident, or mistake, made his specification of claim too broad, claiming more than that of which he was the original or first inventor, some material and substantial part of the thing patented being truly and justly his own, any such patentee, his administrators, executors, and assigns, whether of the whole or of a sectional interest therein, may make disclaimer of such parts of the thing patented as the disclaimant shall not claim to hold by virtue of

the patent or assignment, stating therein the extent of his interest in such patent; which disclaimer shall be in writing, attested by one or more witnesses, and recorded in the Patent Office, on payment by the person disclaiming, in manner as other patent duties are required by law to be paid, of the sum of ten dollars. And such disclaimer shall thereafter be taken and considered as part of the original specification, to the extent of the interest which shall be possessed in the patent or right secured thereby, by the disclaimant, and by those claiming by or under him, subsequent to the record thereof. But no such disclaimer shall effect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing the same.

Applications for additions to newly discovered improvements to be made to existing patents, &c.

SEC. 8. *And be it further enacted*, That whenever application shall be made to the Commissioner for any addition of a newly discovered improvement to be made to an existing patent, or whenever a patent shall be returned for correction and reissue, the specification of claim annexed to every such patent shall be subject to revision and restriction, in the same manner as are original applications for patents; the Commissioner shall not add any such improvement to the patent in the one case, nor grant the reissue in the other case, until the applicant shall have entered a disclaimer, or altered his specification of claim in accordance with the decision of the Commissioner; and in all such cases, the applicant, if dissatisfied with such decision, shall have the same remedy, and be entitled to the benefit of the same privileges and proceedings, as are provided by law in the case of original applications for patents.

When, by mistake, &c., any patentee claims to be the original inventor of part of the thing patented, of which he was not, &c.

SEC. 9. *And be it further enacted*, (any thing in the fifteenth section of the act, to which this is additional, to the contrary notwithstanding,) That whenever, by mistake, accident, or inadvertence, and without any wilful default or intent to defraud or mislead the public, any patentee shall have in his specification claimed to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for

so much of the invention or discovery as shall be truly and bonâ fide his own: *Provided*, It shall be a material and substantial part of the thing patented, and be definitively distinguishable from the other parts so claimed without right as aforesaid. And every such patentee, his executors, administrators, and assigns, whether of a whole or of a sectional interest therein, shall be entitled to maintain a suit at law or in equity on such patent for any infringement of such part of the invention or discovery as shall be bonâ fide his own as aforesaid, notwithstanding the specification may embrace more than he shall have any legal right to claim. But in every such case in which a judgment or verdict shall be rendered for the plaintiff, he shall not be entitled to recover costs against the defendant, unless he shall have entered at the Patent Office, prior to the commencement of the suit, a disclaimer to all that part of the thing patented which was so claimed without right: *Provided, however*, That no person bringing any such suit shall be entitled to the benefits of the provisions contained in this section, who shall have unreasonably neglected or delayed to enter at the Patent Office a disclaimer as aforesaid.

Proviso.

Further proviso.

Agents to be appointed to receive and forward models, &c.

SEC. 10. *And be it further enacted*, That the Commissioner is hereby authorized and empowered to appoint agents in not exceeding twenty of the principal cities or towns in the United States, as may best accommodate the different sections of the country, for the purpose of receiving and forwarding to the Patent Office all such models, specimens of ingredients, and manufactures, as shall be intended to be patented or deposited therein, the transportation of the same to be chargeable to the patent fund.

Two examining and one copying clerk to be appointed.

Temporary clerks may be employed.

SEC. 11. *And be it further enacted*, That instead of one examining clerk, as provided by the second section of the act to which this is additional, there shall be appointed in manner therein provided, two examining clerks, each to receive an annual salary of fifteen hundred dollars; and, also, an additional copying clerk, at an annual salary of eight hundred dollars. And the Commissioner is also authorized to employ, from time to time, as many temporary clerks as may be necessary to execute the copying and draughting required by the first section of this act, and to examine and compare the

records with the originals, who shall receive not exceeding seven cents for every page of one hundred words, and for drawings and comparison of records with originals, such reasonable compensation as shall be agreed upon or prescribed by the Commissioner.

Certificate of the Commissioner to be sufficient warrant to the Treasurer.

SEC. 12. *And be it further enacted*, That whenever the application of any foreigner for a patent shall be rejected and withdrawn for want of novelty in the invention, pursuant to the seventh section of the act to which this is additional, the certificate thereof of the Commissioner shall be a sufficient warrant to the Treasurer to pay back to such applicant two-thirds of the duty he shall have paid into the Treasury on account of such application.

Affirmation may be substituted for an oath.

SEC. 13. *And be it further enacted*, That in all cases in which an oath is required by this act, or by the act to which this is additional, if the person of whom it is required shall be conscientiously scrupulous of taking an oath, affirmation may be substituted therefor.

Moneys paid into the treasury for patents, &c., prior to passage of the act to which this is additional, to be carried to credit of patent fund created by said act; and said fund appropriated for salaries, &c.

SEC. 14. *And be it further enacted*, That all moneys paid into the Treasury of the United States for patents and for fees for copies furnished by the Superintendent of the Patent Office prior to the passage of the act of which this is additional, shall be carried to the credit of the patent fund created by said act; and the moneys constituting said fund shall be, and the same are hereby, appropriated for the payment of the salaries of the officers and clerks provided by said act, and all other expenses of the Patent Office, including all the expenditures provided for by this act; and, also, for such other purposes as are or may be hereafter, specially provided for by law.

Commissioner authorized to draw upon the same, &c.; and lay before Congress annually a statement of expenditures, &c., and also, a list of patents, &c.

And the Commissioner is hereby authorized to draw upon said fund, from time to time, for such sums as shall be necessary to carry into effect the provisions of this act, governed, however, by the several limitations herein contained. And it shall be his duty to lay before Congress, in the month of January, annually, a detailed statement of the expenditures and payments by him made from said fund. And it shall also be his duty to lay before Congress, in the month of January, annually, a list of all patents which shall have been granted during the preceding year, designating, under proper heads, the subjects of such patents, and furnishing an alphabetical list of the

patentees, with their places of residence; and he shall also furnish a list of all patents which shall have become public property during the same period; together with such other information of the state and condition of the Patent Office as may be useful to Congress or the public.

Approved March 3d, 1837.

CHAP. LXXXVIII. — AN ACT in addition to an "Act to promote the progress of the useful arts."

Act of July 4, 1836, chap. 357.
Act of Aug. 29, 1842, ch. 263.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be appointed, in manner provided in the second section of the act to which this is additional, two assistant examiners, each to receive an annual salary of twelve hundred and fifty dollars.

Two assistant examiners to be appointed; how; their salaries.

Temporary clerks.

Proviso.

SEC. 2. *And be it further enacted*, That the Commissioner be authorized to employ temporary clerks to do any necessary transcribing, whenever the current business of the office requires it: *Provided, however*, That instead of salary a compensation shall be allowed, at a rate not greater than is charged for copies now furnished by the office.

List of patents to be published.

SEC. 3. *And be it further enacted*, That the Commissioner is hereby authorized to publish a classified and alphabetical list of all patents granted by the Patent Office previous to said publication, and retain one hundred copies for the Patent Office, and nine hundred copies to be deposited in the library of Congress, for such distribution as may be hereafter directed; and that one thousand dollars, if necessary, be appropriated, out of the patent fund, to defray the expense of the same.

Pay for use of rooms in City Hall.

SEC. 4. *And be it further enacted*, That the sum of three thousand six hundred and fifty-nine dollars and twenty-two cents be, and is hereby, appropriated from the patent fund, to pay for the use and occupation of rooms in the City Hall by the Patent Office.

Purchase of books.

SEC. 5. *And be it further enacted*, That the sum of one thousand dollars be appropriated from the patent fund, to be expended under the direction of the Commissioner, for the purchase of necessary books for the library of the Patent Office.

No person to be debarred from receiving a patent, &c.

SEC. 6. *And be it further enacted*, That no person shall be debarred from receiving a patent for any invention or discovery, as provided in the act approved on the fourth day of July, one thousand eight hundred and thirty-six, to which this is additional, by reason of the same having been patented in a foreign country more than six months prior to his application: *Provided*, That the same shall not have been introduced into public and common use in the United States prior to the application for such patent: *And provided, also*, That in all cases every such patent shall be limited to the term of fourteen years from the date or publication of such foreign letters-patent.

Proviso.

Proviso.

Persons, &c., having purchased or constructed any newly invented machine, &c.

SEC. 7. *And be it further enacted*, That every person or corporation who has, or shall have, purchased or constructed any newly invented machine, manufacture, or composition of matter, prior to the application by the inventor or discoverer for a patent, shall be held to possess the right to use, and vend to others to be used, the specific machine, manufacture, or composition of matter so made or purchased, without liability therefor to the inventor, or any other person interested in such invention; and no patent shall be held to be invalid by reason of such purchase, sale, or use, prior to the application for a patent as aforesaid, except on proof of abandonment of such invention to the public, or that such purchase, sale, or prior use, has been for more than two years prior to such application for a patent.

So much of 11th sec. act July 4, 1332, chap. 357, as requires payment for recording assignments, repealed.

SEC. 8. *And be it further enacted*, That so much of the eleventh section of the above recited act as requires the payment of three dollars to the Commissioner of Patents for recording any assignment, grant, or conveyances of the whole or any part of the interest or right under any patent, be, and the same is hereby, repealed; and all such assignments, grants, and conveyance shall, in future, be recorded without any charge whatever.

Agricultural statistics, &c.

SEC. 9. *And be it further enacted*, That a sum of money, not exceeding one thousand dollars, be, and the same is hereby, appropriated out of the patent fund, to be expended by the Commissioner of Patents in the collection of agricultural statistics, and for other agricultural purposes; for which the said Commissioner shall account in his next annual report.

Provisions 16th sec. act July 4, 1936, chap. 357, extended.

SEC. 10. *And be it further enacted*, That the provisions of the sixteenth section of the before recited act shall extend to all cases where patents are refused for any reason whatever, either by the Commissioner of Patents or by the Chief Justice of the District of Columbia, upon appeals from the decision of said Commissioner, as well as where the same shall have been refused on account of, or by reason of, interference with a previously existing patent; and in all cases where there is no opposing party, a copy of the bill shall be served upon the Commissioner of Patents, when the whole of the expenses of the proceeding shall be paid by the applicant, whether the final decision shall be in his favor or otherwise.

Appeals.

SEC. 11. *And be it further enacted*, That in cases where an appeal is now allowed by law from the decision of the Commissioner of Patents to a board of examiners provided for in the seventh section of the act to which this is additional, the party, instead thereof, shall have a right to appeal to the Chief Justice of the district court of the United States for the District of Columbia, by giving notice thereof to the Commissioner, and filing in the Patent Office, within such time as the Commissioner shall appoint, his reasons of appeal, specifically set forth in writing, and also paying into the Patent Office, to the credit of the patent fund, the sum of twenty-five dollars. And it shall be the duty of said Chief Justice, on petition, to hear and determine all such appeals, and to revise such decisions in a summary way, on the evidence produced before the Commissioner, at such early and convenient time as he may appoint, first notifying the Commissioner of the time and place of hearing, whose duty it shall be to give notice thereof to all parties who appear to be interested therein, in such manner as said judge shall prescribe. The Commissioner shall also lay before the said judge all the original papers and evidence in the case, together with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal, to which the revision shall be confined. And at the request of any party interested, or at the desire of the judge, the Commissioner and the examiners in the Patent Office may be examined under oath, in explanation of the principles of

the machine or other thing for which a patent, in such case, is prayed for. And it shall be the duty of the said judge, after a hearing of any such case, to return all the papers to the Commissioner, with a certificate of his proceedings and decision, which shall be entered of record in the Patent Office; and such decision, so certified, shall govern the further proceedings of the Commissioner in such case: *Provided, however*, That no opinion or decision of the judge in any such case shall preclude any person interested in favor or against the validity of any patent which has been, or may hereafter be, granted, from the right to contest the same in any judicial court, in any action in which its validity may come in question.

Proviso.

Commissioner may make regulations respecting contested cases.

SEC. 12. *And be it further enacted*, That the Commissioner of Patents shall have power to make all such regulations in respect to the taking of evidence to be used in contested cases before him, as may be just and reasonable. And so much of the act to which this is additional, as provides for a board of examiners, is hereby repealed.

Compensation of Chief Justice.

SEC. 13. *And be it further enacted*, That there be paid annually, out of the patent fund, to the said Chief Justice, in consideration of the duties herein imposed, the sum of one hundred dollars.

Approved March 3, 1839.

CHAP. CCLXIII.—AN ACT in addition to an act to promote the progress of the useful arts, and to repeal all acts and parts of acts heretofore made for that purpose.

Act of July 4, 1836, chap. 357.
Act of Mar. 3, 1837, chap. 45.
Act of Mar. 3, 1839, chap. 87.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Treasurer of the United States be, and he hereby is, authorized to pay back, out of the patent fund, any sum or sums of money, to any person who shall have paid the same into the Treasury, or to any receiver or depository to the credit of the Treasurer, as for fees accruing at the Patent Office through mistake, and which are not provided to be paid by existing laws, certificate thereof being made to said Treasurer by the Commissioner of Patents.

Treasurer authorized to pay back, out of the patent fund, certain money paid as fees.

Sec. 3, act of Mar. 3, 1837, chap. 43, extended to patents granted prior to 15th Dec'r, 1836, though lost subsequently.

SEC. 2. *And be it further enacted*, That the third section of the act of March, eighteen hundred and thirty-seven, which authorizes the renewing of patents lost prior to the fifteenth of December, eighteen hundred and thirty-six, is extended to patents granted prior to said fifteenth day of December, though they may have been lost subsequently: *Provided, however*, The same shall not have been recorded anew under the provisions of said act.

Proviso.

Citizens, &c., may obtain a patent; how.

SEC. 3. *And be it further enacted*, That any citizen or citizens, or alien or aliens, having resided one year in the United States, and taken the oath of his or their intention to become a citizen or citizens, who by his, her, or their own industry, genius, efforts, and expense, may have invented or produced any new and original design for a manufacture, whether of metal or other material or materials, or any new and original design for the printing of woollen, silk, cotton, or other fabrics, or any new and original design for a bust, statue, or bas relief or composition in alto or basso relievo, or any new and original impression or ornament, or to be placed on any article of manufacture, the same being formed in marble or other material, or any new and useful pattern, or print, or picture, to be either worked into or worked on, or printed or painted, or cast, or otherwise fixed on, any article of manufacture, or any new and original shape or configuration of any article of manufacture not known or used by others before his, her, or their invention or production thereof, and prior to the time of his, her, or their application for a patent therefor, and who shall desire to obtain an exclusive property or right therein to make, use, and sell, and vend the same, or copies of the same, to others, by them to be made, used, and sold, may make application, in writing, to the Commissioner of Patents, expressing such desire, and the Commissioner, on due proceeding had, may grant a patent therefor, as in the case now of application for a patent: *Provided*, That the fee in such cases, which by the now existing laws would be required of the particular applicant, shall be one-half the sum, and that the duration of said patent shall be seven years, and that all the regulations and provisions which now apply to the obtaining or protection of patents not inconsistent with the provisions of this act, shall apply to applications under this section.

Proviso.

Oath may be taken before U. S. ministers, &c.

SEC. 4. *And be it further enacted*, That the oath required for applicants for patents may be taken, when the applicant is not, for the time being, residing in the United States, before any minister, phenipotentiary, charge d'affaires, consul, or commercial agent holding commission under the government of the United States, or before any notary public of the foreign country in which such applicant may be.

Penalty for infringing the rights of a patentee, &c., by marking.

SEC. 5. *And be it further enacted*, That if any person or persons shall paint or print, or mould, cast, carve, or engrave, or stamp, upon any thing made, used, or sold by him, for the sole making or selling which he hath not, or shall not have obtained letters-patent, the name or any imitation of the name of any other person who hath or shall have obtained letters-patent for the sole making and vending of such thing, without consent of such patentee, or his assigns or legal representatives; or if any person, upon any such thing not having been purchased from the patentee, or some person who purchased it from or under such patentee, or not having the license or consent of such patentee, or his assigns or legal representatives, shall write, paint, print, mould, cast, carve, engrave, stamp, or otherwise make or affix the word "patent," or the words "letters-patent," or the word "patentee," or any word or words of like kind, meaning, or import, with the view or intent of imitating or counterfeiting the stamp, mark, or other device of the patentee, or shall affix the same, or any word, stamp, or device of like import, on any unpatented article for the purpose of deceiving the public, he, she, or they, so offending, shall be liable for such offence to a penalty of not less than one hundred dollars, with costs, to be recovered by action in any of the circuit courts of the United States, or in any of the district courts of the United States having the powers and jurisdiction of a circuit court; one-half of which penalty, as recovered, shall be paid to the patent fund, and the other half to any person or persons who shall sue for the same.

How recoverable, &c.

Patentees, &c., required to mark articles offered for sale.

SEC. 6. *And be it further enacted*, That all patentees and assignees of patents hereafter granted, are hereby required to stamp, engrave, or cause to be stamped or engraved, on each article vended or offered for sale, the date of the patent; and if any person or persons, paten-

Penalty for neglect.

tees or assignees, shall neglect to do so, he, she, or they shall be liable to the same penalty, to be recovered and disposed of in the manner specified in the foregoing fifth section of this act.

Approved August 29, 1842.

CHAP. XLVII.—AN ACT to provide additional examiners in the Patent Office, and for other purposes.

May 28, 1848.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be appointed, in the manner provided in the second section of the act entitled "An Act to promote the progress of useful arts, and to repeal all acts and parts of acts heretofore made for that purpose," approved July fourth, eighteen hundred and thirty-six, two principal examiners, and two assistant examiners, in addition to the number of examiners now employed in the Patent Office; and that hereafter each of the principal examiners employed in the Patent Office shall receive an annual salary of twenty-five hundred dollars, and each of the assistant examiners an annual salary of fifteen hundred dollars: *Provided*, That the power to extend patents, now vested in the board composed of the Secretary of State, Commissioner of Patents, and Solicitor of the Treasury, by the eighteenth section of the act approved July fourth, eighteen hundred and thirty-six, respecting the Patent Office, shall hereafter be vested solely in the Commissioner of Patents; and when an application is made to him for the extension of a patent according to said eighteenth section, and sixty days' notice given thereof, he shall refer the case to the principal examiner having charge of the class of inventions to which said case belongs, who shall make a full report to said Commissioner of the said case, and particularly whether the invention or improvement secured in the patent was new and patentable when patented; and thereupon the said Commissioner shall grant or refuse the extension of said patent, upon the same principles and rules that have governed said board; but no patent shall be extended for a longer term than seven years.

1836, ch. 357. Additional examiners in the Patent Office

Salaries.

Extension of patents.

Fee for recording conveyances of patents.

SEC. 2. *And be it further enacted*, That hereafter the Commissioner of Patents shall require a fee of one dollar for recording any assignment, grant or conveyance, of the whole or any part of the interest in letters-patent, or power of attorney, or license to make or use the things patented, when such instrument shall not exceed three hundred words; the sum of two dollars when it shall exceed three hundred and shall not exceed one thousand words; and the sum of three dollars when it shall exceed one thousand words; which fees shall in all cases be paid in advance.

Two copying and recording clerks authorized.

SEC. 3. *And be it further enacted*, That there shall be appointed in manner aforesaid two clerks, to be employed in copying and recording, and in other services in the Patent Office, who shall be paid a salary of one thousand two hundred dollars per annum.

Franking privilege of commissioner of Patents.

SEC. 4. *And be it further enacted*, That the Commissioner of Patents is hereby authorized to send by mail, free of postage, the annual reports of the Patent Office, in the same manner in which he is empowered to send letters and packages relating to the business of the Patent Office.

Approved May 27, 1848.

DECISIONS

OF THE

HON. JUDGE CRANCH,

IN CASES OF

APPEAL FROM THE COMMISSIONER OF PATENTS.

NOTE. — The following decisions of Judge Cranch, in cases of appeal from the Commissioner of Patents, are reprinted here for the convenience of the profession and of persons interested in applications at the Patent Office, but without intending to express any assent or dissent, with regard to the doctrines contained in them. The decisions were not received in season for a careful and deliberate examination, and are, therefore, not referred to in the body of this work. G. T. C.

Boston, April 10th, 1849.

KEMPER'S CASE.

THE petition of John F. Kemper sets forth that he "has *invented* certain *improvements* in the manner of constructing vessels for the stowing and carrying ice; and also *an improvement in the manner of stowing the same*, and prays that letters-patent of the United States may be granted to him *therefor*, securing to him and his legal representatives an exclusive right in and to his said invention, agreeably to the provisions of the acts of Congress in that case made and provided; he having paid thirty dollars into the treasury of the United States, and otherwise complied with the requirements of the said acts."

In his specification, after describing his vessel and the improvements in the same, and certain matters to be attended to in the stowing of the ice, he says:

"I have discovered that, for the purpose of keeping ice for a great length of time, it is necessary, in stowing it, to place all the pieces edgewise, as, when placed flatwise, small openings are formed through it by the percolation of water or otherwise, and that the injurious effect goes on increasing and eventually producing a rapid destruction thereof: this I obviate, by carefully packing all the blocks edgewise, when, as experience has abundantly shown, no such effect is produced. This mode of stowing applies not only to vessels, but also to ice houses, and wherever ice is to be preserved."

After stating what he disclaims and what he claims as his invention and improvements in constructing vessels for the transportation of ice, he says:

"In the manner of stowing the ice, I claim the placing of the prepared blocks edgewise, in the manner and for the beneficial purpose herein set forth."

No objection was made by the Commissioner of Patents to the grant of a patent for the novel construction of vessels for the transportation of ice as claimed by him; but the Commissioner decided that the applicant was not entitled to receive a patent for the manner of stowing the ice by placing the blocks edgewise.

From this decision he has appealed, according to the provisions of the 11th section of the act of March 3, 1839, and the 7th section of the act of July 4, 1836; and has filed in the Patent Office his reasons of appeal, and paid the sum of twenty-five dollars to the credit of the patent fund.

By the 11th section of the act of March 3, 1839, ch. 88, (pamphlet edition,) the judge is to confine his revision to the points involved in the *reasons* of *appeal*, and the Commissioner of Patents is to lay before the judge the grounds of his decision touching the same points.

The applicant claims a patent for his vessel, and his manner of stowing ice in vessels and ice houses, as one invention, and pays thirty dollars as for one patent.

The Commissioner denies his right to a patent for his manner of stowing, but admits it for his improvement in the construction of his vessel.

The first and principal point involved in the reasons of appeal is, whether the thing for which the patent is claimed is the invention or discovery of a new and useful art, or of a new improvement on an art, within the meaning of the constitution and laws of the United States respecting patents.

The invention, if it be one, consists only in laying each block of ice on its narrowest side. Can that act be considered as a new thing invented or made? Was it never done before? If it has been done before, although the *beneficial effect* of so placing it, rather than on its broadest side, had not been discovered, it is not a new thing. The only thing new is the discovery of the beneficial effect, and that is the discovery of a thing which existed before; for if it is now true that ice so placed keeps longer than when differently placed, it was always true; and that it existed before is shown in the specification, where it is said that the effect was discovered by *experience.*

Much of the confusion of ideas upon this subject has arisen from the ambiguity of the words "*discover*" and "*discovery*," used in the constitution and the patent laws of the United States. In their primary and common sense they are not synonymous with "*invent*" and "*invention.*"

Mr. Webster, in the last 8vo. edition of his dictionary, under word "*discover*," says: "discover differs from invent; the *discover* what *before existed;* the invent what did *not before exist.*" And under the article "*invention*," he says: "invention differs from discovery." "Invention is applied to the contrivance and production of something that did not before exist. '*Discovery*' brings to light that which *existed before*, but which was not known."

A discovery, in this sense, is not the subject of a patent; and it will be found, by a careful perusal of the constitution and laws of the United States upon the subject of patents for useful arts, &c., that it is not there used in this sense, but always as synonymous with *invention.*

Thus the constitution, (in ch. 4, art. 1, sec. 8, clause 8,) among the enumerated powers given to Congress, says: "To promote the progress of science and useful arts, by securing for limited terms to authors and *inventors* the exclusive right to their respective writings and discoveries."

Here it is evident, that the "*discoveries*," the use of which is to be secured, are the discoveries of *inventors* only. The applicant must invent, contrive, or produce something that did not exist before. A man may *discover* (i. e. may disclose) his invention; and for that discovery or disclosure he will be entitled to the exclusive use of his *invention* for a limited time.

In the first act of Congress, "to promote the progress of useful

arts," passed April 10, 1790, the words *invention* and *discovery* are used synonymously throughout the whole act; and whether application was for a patent, for an invention, or a discovery, it must be founded upon an invention or discovery of an useful art, &c., (or improvement therein,) not before known or used. The discovery of a new art that will justify a patent under that act can be only the *invention* of a new art, and the discovery of a new improvement, the *invention* of a new improvement. In every case, therefore, the applicant must be the inventor, and by the constitution none but *inventors* could be entitled to the monopoly.

The next act was passed on the 21st of February, 1793, entitled "an act to promote the progress of useful arts, and to repeal the act heretofore made for that purpose."

By the first section of this act, the applicant was to declare that he had *invented* (not discovered) a new and useful art, &c., or improvement, &c., and the patent was to give a short description of the said invention or *discovery*. Here "*discovery*" is intended to be synonymous with invention, for the claimant had alleged an *invention only*; and it is afterwards again in the same section called, the said invention or *discovery*. The second section says, that any person who shall have *discovered* an improvement and obtained a patent therefor, shall not be at liberty to use the "*original discovery*, nor shall the first inventor" (i. e. of the *original discovery* which he had alleged to be his *invention*) "be at liberty to use the improvement;" and the change of form or properties was not to be deemed a "*discovery*." By the third section, "every *inventor* was to swear or affirm that he believed that he was the true inventor or *discoverer* of the art, &c." and deliver a written description of his "*invention*, by which it may be distinguished from other *inventions*."

The fourth and fifth sections speak of *inventors* and *inventions*, without saying any thing of discoverers or discoveries. The sixth section, alluding to the same *invention*, calls it "his *discovery*," and speaks of *original discovery* and *supposed discovery*, and the discovery of another man, and all these expressions are used in reference to what had been patented as inventions. The tenth section speaks of the *true inventor or discoverer*, and the eleventh section provides that *every inventor* shall pay thirty dollars before he presents his petition.

The act of 17th of April, 1800, only extends the privileges of the

former act to aliens, and to the legal representatives of *inventors* and *discoverers*, &c., and gives treble damages for violation of patent rights.

The act of July 13, 1832, applies only to aliens.

The next act is that of July 4, 1836, entitled "an act to promote the progress of useful arts, and to repeal all acts and parts of acts heretofore made for that purpose."

The first section speaks of "issuing patents for new and useful *discoveries*, *inventions*, and *improvements* as part of the business of the Commissioner of Patents, whose office was therein created.

In the 5th section the words *invention* and *discovery are* used throughout as synonymous.

The 6th section, which declares for what a patent may issue, shows that the applicant must have "*discovered* or *invented*" some new art, &c., or improvement, and it is called "his discovery or invention thereof," and he is called the *inventor* or *discoverer*. It then says: "But before any inventor shall receive a patent for any such new *invention* or *discovery*, he shall deliver a written description of his *invention* or *discovery*." The descriptions and drawings are to be "signed by the *inventor*," and he is to furnish a model of "his *invention*," and he is to make oath "that he does verily believe that he is the original and first *inventor* or *discoverer* of the art, &c., or improvement, for which he solicits a patent; and that he does not know or believe that *the same* was ever before known or used."

In the 7th section, wherever the word *discovery* or *discoverer* is coupled with invention or inventor, it is evident that it means the discovery or discoverer of something *new* — something that did not exist before — and, therefore, equivalent to *invention* and *inventor*. In the latter part of the section it speaks of the "science to which the alleged *invention* appertains;" and of the part or parts of the *invention* which he (the Commissioner) considers as not entitled to be patented.

The 8th section speaks of the right of "*an original and true inventor*" to a patent for his invention, and says nothing of a *discovery* or *discoverer*.

The 12th section speaks only of invention, not discovery; yet it is evidently applicable to the former sections, which use the words "*invention or discovery*."

The 13th section provides that where a patent shall be "invalid by reason of the patentee claiming in his specification, as his own

invention, more than he had a right to claim as *new*," the Commissioner " may cause a new patent to be issued to the said *inventor* for the same invention," &c. The same section afterwards speaks of a " description and specification of any new improvement of the original *invention* or *discovery* which shall have been *invented or discovered by him*" (the patentee) " subsequent to the date of his patent.

The 15th section specifies the special matter which may be given in evidence by the defendant under the general issue, among which is evidence tending to prove that the description and specification filed by the plaintiff does not contain the whole truth relative to his *invention* or *discovery*, or that the patentee was not the original and first *inventor* or *discoverer* of the thing patented, or of a substantial and material part thereof claimed *as new*; or that he had surreptitiously or unjustly obtained the patent for that which was, in fact, *invented* or *discovered* by another. It also speaks of " the invention or discovery for which the patent issued." It speaks also of the first *inventor*, without adding *discoverer*, and of the *invention*, without adding *discovery*.

The 16th section speaks of the *inventions* patented, and generally of inventions, without adding *discoveries*.

The 19th section speaks of injunctions to prevent the violation of the rights of any *inventor*, but says nothing of any discoverer, showing that the word *inventor* included all such discoverers as were contemplated by the legislature as within the protection of the *patent* laws.

The 18th section provides " that whenever the patentee of an *invention* or *discovery* shall desire to extend his patent beyond the term of its limitation, he may make application," &c., and shall " furnish a statement of the ascertained value of the invention;" and having failed to obtain from the use and sale of *his invention* a reasonable remuneration, &c., he may have the term extended. Here it is evident that the word *invention* was understood as equivalent to " *invention and discovery*," mentioned in the beginning of the section; and shows that the discovery contemplated was the discovery of something *new*, i. e. that did not exist before, and was used as synonymous with the word *invention*.

The remaining sections of the act do not use the words *invention* or *discovery*.

The act of March 3, 1839, (pamphlet, ch. 88, p. 74,) section 7,

says that every person who shall have constructed any "newly *invented* machine, manufacture or composition of matter, prior to the application by the *inventor or discoverer* for a patent, shall be held to possess the right to use," &c., "the specific machine," &c., "so made," &c., "without liability therefor to the *inventor* or any other person interested in such *invention;* and no patent shall be held to be invalid by reason of such use," &c., "except on proof of abandonment of such invention to the public," &c.

There is nothing further in this act tending to explain the meaning of the word "discovery," as used in the constitution and laws of the United States respecting patents for useful arts.

Upon consideration of the constitution and laws of the United States upon this subject, therefore I think I may safely say that the claimant in this case can build no argument upon the supposed difference between a discovery and an invention, for no discovery will entitle the discoverer to a patent which does not in effect amount to the contrivance or production of something which did not exist before; or, in other words, to an *invention.*

The patent claimed is for "*the placing of the prepared blocks edgewise,*" for the purpose set forth in the specification.

The placing of the blocks of ice edgewise is not the contrivance or production of any thing which did not exist before. It is not an invention. It is not a discovery, because everybody knew before that blocks of ice might be placed upon their narrowest side; and it is asserted by the Commissioner in the grounds of his decision, and not denied in argument, that blocks of ice have been so placed, whether by accident or design is immaterial — the placing is not new. It is not an invention.

The discovery of a new effect of that which existed before is not the subject of a patent. Blocks of ice have been placed on edge before the alleged discovery by the claimant. If they were so placed with intent to retard their dissolution, I presume the claimant would at once abandon his claim. But the intent can be no ground of a patent. The claimant may be the first who placed blocks of ice on edge *with that intent*, but this cannot justify a patent for doing that which was often done without that intent.

In truth, the whole merit of the claimant is the discovery of a fact which existed long before, viz: that ice placed edgewise kept longer than when placed flatwise. This is a mere naked *discovery*, for which a patent cannot be granted. There is no invention — nothing contrived or produced — which did not exist before.

It is, however, contended that, although the discovery, merely as such, is not patentable, and although blocks of ice may have been often placed edgewise, yet "it will not be pretended that, in vessels or in ice houses, ice had ever been stowed away upon the *system* adopted by Mr. Kemper." By "*system*," I suppose, must here be meant intent or purpose, for the placing the ice on edge cannot, of itself, form a system. A system, as defined by Dr. Johnson, is "any complexure or combination of many things acting together; a scheme which reduces many things to regular dependence or coöperation; a scheme which unites many things in order."

The patent, in the present case, is not asked for a system, but for the exclusive right to place blocks of ice on their narrowest side. The claim, therefore, obtains no support by calling it a *system*, nor by calling it a "*plan*," as in the reasons of appeal, where it is asked, "Is the proposed plan unquestionably old." What the writer meant by the word *plan* is not very obvious; but I presume he intended to refer to the placing of the ice *edgewise, with the intent* that it should thereby keep longer than if otherwise placed. He probably meant to include the *intent* with the *act*; but, as before observed, if the thing done be not new, the intent cannot entitle it to a patent.

It is admitted, in argument in behalf of the appellant, "that a discovery, taken abstractedly, is not patentable;" but it is contended "that, if the thing discovered be practically applied to produce a new and useful effect, the manner of attaining the end is patentable." Now, let us apply this rule or doctrine to the present case. The thing discovered is the beneficial *effect* of the position of the ice — not the position itself. How is this effect, which is the thing discovered, applied by the appellant to produce a new and useful effect? And what is the new effect thus to be produced by the effect discovered? Whatever it may be, it must be produced by means that are new, by some *invention*, some contrivance, or production of something that did not before exist. The beneficial effect of the position of the ice is the retardation of its dissolution. No new and further effect is proposed. That retardation is the ultimate effect contemplated. No new means are intended to be used which can be the subject of a patent. A new effect from old means will not justify a patent from those old means. This case is, therefore, not within the rule or doctrine thus advanced to supply it.

The patent to Mr. Tudor for filling the interstices between the blocks of ice with some non-conducting substance is cited as a precedent for the present application. No judicial decision is produced affirming the validity of that patent, and it seems to me to rest upon very doubtful ground; but it is to be presumed that the commissioner who issued it was satisfied that the means used were a new invention.

Mr. Dolland's patent for an improvement is also referred to; but there the means used were decided to be, as to him, a new invention, although Dr. Hall had, forty years before, constructed two telescopes upon *the same principle*, but had not pursued the matter and brought it into public use. That case has no analogy to the present.

In the reasons of appeal, it is suggested that patents for *processes* or modes of *procedure*, in preserving animal and vegetable substances by means extremely simple, have been granted in England and in this country; but as they are not particularly brought to my notice, I cannot say how far they may be considered as precedents to justify the present application. I presume that, in all of them, something new was invented; something more than the discovery of a fact or a principle, and the application of such fact or principle to some useful purpose by old means, or by means not newly invented.

It is also suggested, in the reasons of appeal, that "the Commissioner is *bound* to issue a patent for the thing claimed, if, on examination, it shall not appear to him that the same had been invented or discovered by any other person in this country prior to the alleged invention or discovery thereof by the applicant, or that it had been patented or described, &c., as stated in the 7th section of the act of July 4, 1836; and that the *discovery* in question is not placed in either of the conditions that would justify the refusing of a patent under the law.

But the 7th section refers to the 6th, by which it appears that a patent is to be issued only to a person who has discovered or invented some *new* and useful art, &c., or some new and useful improvement on any art, &c.

The Commissioner, therefore, is to decide, in the first place, whether the invention is new, and whether it is the proper subject of a patent; he is bound to refuse it, although it may not be liable to the particular objections specified in the 7th section.

It is also said, in the reasons of appeal, that the professed rule of the office is, "that where the question is at all doubtful, the patent should be granted."

This rule, I suppose, must have been adopted when the applicant had no remedy if the Commissioner rejected his claim, and the decision of the Commissioner was affirmed by the board of examiners under the 7th and 16th sections of the act of July 4, 1836; which last mentioned section gave the applicant a remedy, by bill in equity, only in case the patent was refused on the ground that it would interfere with an unexpired patent previously granted. In all other cases of refusal, the applicant had no remedy; whereas, if the patent should be granted, its validity might be, at all times, questioned in the courts of law. It was reasonable, therefore, to adopt such a rule.

But now, by the 10th section of the act of March 3, if the patent be refused for any cause, either by the Commissioner or the judge, the applicant may still establish his right to a patent by a bill in equity.

The reason of the rule, therefore, fails, and I should not think myself bound by it, if I thought this to be a case of doubt, which I do not.

Every patent is a monopoly; and nothing can justify it but the natural right of property which a man has in the products of his own labor and ingenuity. With this exception, it is in derogation of common right; and it should be strictly confined to the case excepted. Upon the whole, therefore, I am of opinion, and so decide, that the decision of the Commissioner of Patents, that the applicant, John F. Kemper, was not entitled to receive a patent for the manner of stowing ice, by placing the blocks edgewise, was correct, and the same is hereby confirmed.

And I hereby certify the same to the said Commissioner of Patents. And I do further certify that, having received an appeal and the petition herewith enclosed of John F. Kemper, and the original papers named in the letter from the Commissioner of Patents of the 13th of February, 1841, herewith also enclosed, I ordered notice to be given, as appears in my order of the 17th of February, 1841, also herewith enclosed, which was returned to me on the 18th of February, 1841, with service acknowledged. I further certify that the parties appeared before me at my chambers, on Monday, the 8th of March, 1841, when, by consent, the hearing

was postponed to Monday, the 15th of March, when the applicant, by Dr. Thomas P. Jones, his attorney, presented his written answer to the grounds of the Commissioner's decision, (which written answer is also herewith enclosed,) when the hearing was further postponed, by consent, to Wednesday the 17th instant, and on that day further postponed until Friday, the 19th instant, when the parties attended, and the Commissioner filed his reply to the argument of Dr. Jones, which is also herewith enclosed, and the case was then submitted without further argument.

All which papers are herewith transmitted to the Commissioner of Patents this 22d day of May, 1841. W. CRANCH.

GEORGE W. HILDRETH, appellant,
vs.
GEORGE HEATH, appellee.
} Appeal from the decision of the Commissioner of Patents.

On the 29th of April, 1840, George Heath filed in the Patent Office his application for a patent for his invention of an improved canal lock gate.

The Commissioner being of opinion that the patent thus applied for would interfere with an unexpired patent granted to George W. Hildreth, on the 19th of March, 1840, gave notice thereof to the parties, and, upon a hearing before him, decided, that George Heath was the original and first inventor, and entitled to a patent therefor.

From this decision Mr. Hildreth has appealed, and the question is now submitted to me by the parties upon written argument.

The Commissioner has furnished a certificate in writing of his opinion and decision; and Mr. Hildreth has filed his reasons of appeal, with the written argument of his counsel.

The reasons for appeal thus filed are eight in number, but may be reduced to three.

1. Because Mr. Heath was not the first inventor, in the meaning of the patent law, inasmuch as his invention was never reduced to practice, but was the mere speculation of a philosopher or mechanician.

2. Because he never filed a *caveat* pursuant to the 12th section of the Act of July 4, 1836.

3. Because he has forfeited his claim to the invention by his delay in applying for a patent.

1. Upon the first point the very ingenious argument of Mr. Hildreth's counsel is founded upon a *dictum* of Mr. JUSTICE STORY, in the case of *Bedford* v. *Hunt, et. al.*, 1 *Mason*, 304, that "the first inventor who has put the invention in practice, *and he only*, is entitled to a patent;" and that *dictum* was perhaps founded on the words in the 6th section of the Act of February 21, 1793, viz: "or that the thing thus secured by patent was not originally discovered by the patentee, *but had been in use*, or had been described in some public work, anterior to the supposed discovery by the patentee," &c., from which an inference seems to be drawn that the defence — *that the matter was not originally discovered by the patentee* — would not avail the defendant, unless he show also that it had been in use by the prior discoverer.

But the words "*but had been in use*" seem to have been carefully excluded from the 15th section of the act of 1836, which, like the 6th section of the act of 1793, states the matters which may be given in evidence under the general issue in an action for infringing the plaintiff's patent.

By thus excluding these words the defence, "that the patentee was not the original and first inventor or discoverer of the thing patented," is complete, without showing that the first inventor had put his invention in practice.

None of the patent laws have ever required that the invention should be in use, or reduced to actual practice, before the issuing of the patent, otherwise than by a model, drawings and specification containing a written description of the invention, and of the manner of making, constructing, and using the same, in such full, clear and exact terms as to enable any person skilled in the art to which it appertains, to make, construct and use the same. In England it is understood that, if the thing is in use before the issuing of the patent, it is void; and our act of March 3, 1839, section 7, in order to meet such an objection, provides that the use of the thing, even by leave of the inventor, for two years before his application for a patent, shall not invalidate it; *a fortiori* the use of by a third person or subsequent inventor, after the first invention and before the issuing of the patent to the first inventor, without his consent, will not, under our patent laws, be a bar to the issuing of it.

Mr. JUSTICE STORY, in the case of Bedford *v.* Hunt, was not considering the question whether the patent *should be issued*, but whether it should be invalidated by prior use. He has not said that,

under any circumstances, an invention must be in use before a patent for it can be obtained, and his dictum is wholly inapplicable to the question whether the Commissioner of Patents should issue a patent.

If a patent should be issued to Mr. Heath, its validity would be still a question open to the courts; and is one which can be conclusively settled by the courts only.

By the 7th section of the act of 1836, the Commissioner is bound to issue a patent in the case, and under the circumstances there stated. He has in such a case no discretion; and the present is such a case.

By that section it is enacted "that, on the filing of any such application, description and specification, and the payment of the duty hereinafter provided, the Commissioner shall make or cause to be made an examination of the alleged new invention or discovery, and if, on such examination, it shall not appear to the Commissioner that the same had been invented or discovered by any other person in this country prior to the alleged invention or discovery thereof by the applicant, or that it had been patented, or described in any printed publication in this or any foreign country; or had been in public use o on sale, with the applicant's consent or allowance, prior to the application, if the Commissioner shall deem it sufficiently useful and important, it shall be his *duty* to issue a patent therefor.

It appears by the proceedings before the Commissioner that Mr. Heath regularly filed his application, description and specification, and paid the duty; that the Commissioner made the examination, and that upon such examination it did *not* appear to him that the same had been invented or discovered by any other person, or had been patented or described in any printed publication in this or any foreign country, prior to the alleged invention or discovery thereof by the applicant; or that it had been in public use or on sale, with the applicant's consent or allowance, prior to his application.

The Commissioner was, therefore, *primâ facie* bound to issue the patent to Mr. Heath.

At first view it may seem doubtful from the words of that section, whether a patent issued to the second inventor, before the application of the first inventor, would not be a bar to the issuing of a subsequent patent to the first inventor. But upon comparing the words of that section with those of the 6th, 8th, and 15th sections

of the same act, it is evident that the patent, which would bar the issuing of a patent to the applicant, must be a patent issued prior to his *invention*, and not merely prior to his *application*.

Having complied with all the requisites of the 7th section, what is to prevent the applicant from obtaining his patent. It is alleged that he was not the first inventor, because he had not reduced his invention to practice. But that objection is answered by showing that there is no law which requires an inventor to put his invention in practice or use, before obtaining his patent; and it is perfectly immaterial to him whether the subsequent inventor had put it in practice or not. That fact cannot effect the right of the first inventor. If Congress had intended that a patent to the second inventor should be a bar to a patent to the first inventor, they would not have given jurisdiction to the Commissioner to decide the question of priority between them, and to grant a patent to the first inventor in cases of interference, as they have done by the eighth section of the act.

Neither that section, nor any other section of that, or any other act, makes the right of the patentee, or of the applicant, depend upon the fact of the invention being reduced to actual practice, except in the case of an *alien patentee* failing and neglecting, "for the space of eighteen months *from the date of the patent*, to put and continue *on sale to the public*, on reasonable terms, the invention or discovery for which the patent issued." From this exception, an inference may be drawn, that a *citizen patentee* cannot lose his right by *non user*, unless it amount to evidence of an abandonment of the patent; and the question of an abandonment of a patent is a question for the jury on a trial at law.

If the invention be the mere speculation of a philosopher or mechanician in his closet, and he takes no step towards obtaining a patent, but keeps his invention secret, and another person, who is also an original but subsequent inventor of the same thing, obtain a patent for it and bring it into use, it has been held, both in England and in this country, that the patentee, in a suit at law, is to be considered as the first inventor. But it has happened in such case, as in many others, that elementary writers, and subsequent tribunals, have laid down the doctrine in broader terms than the cases upon which it was founded will warrant.

Thus SMITH, in his *Epitome of the Patent Laws*, (p. 11,) says: "It sometimes happens that two men severally discover the same

thing, each by his own unassisted exertions; when this happens, the first who communicates it to the public is deemed the first inventor, and entitled to the patent;" and he cites *Boulton* v. *Bull*, 2 *H. Bl.*, 487; *Forsyth* v. *Riviere*, *Chitty*, *Prerog. of the Crown*, 182, *n.*; *Lewis* v. *Marling*, 10 *B. & C.*, 22; *Wood* v. *Zimmer*, *Holt*, *N. P. C.* 98; *Edgebury* v. *Stephens*, 2 *Salk.* 47. And Mr. Justice Story, in the case before cited, says: "The first inventor who has put the invention in practice, and *he only*, is entitled to a patent."

The doctrine thus broadly laid down is not supported to that extent by the cases cited, and it would be unjust, if it were, for it makes no exception of the *bonâ fide* first inventor who is "*using reasonable diligence in adapting and perfecting*" his invention, and whose right is saved by the spirit, if not the letter, of the fifteenth section of the act of 1836, which makes it a good defence to an action for infringing the patent, that the plaintiff had "unjustly obtained the patent for that which was *in fact* invented and discovered by another who was using reasonable diligence in adapting or perfecting the same."

If such a case had been presented to the mind of Mr. Justice Story, there can hardly be a doubt that he would have excepted it from the broad terms of the doctrine as laid by him in the case of Bedford *v.* Hunt.

Such, from the evidence and admissions of counsel, was the case of Mr. Heath. He was using reasonable diligence in adapting and perfecting his invention; and it appears by testimony adduced by Mr. Hildreth that in the winter of 1839, before he obtained his patent, Mr. Heath exhibited to the witness, Alfred Barrett, who had in his possession a model of Mr. Hildreth's paddle-gate, his, the said George Heath's, model of his gate, and claimed to be the inventor thereof; it is probable, therefore, that Mr. Hildreth had notice of Mr. Heath's claim before he obtained his patent.

The doctrine as stated by Mr. Smith and by Mr. Justice Story seems to have originated in *Dolland's* case, cited by Buller, J., in the case of Boulton *v.* Bull. *Dolland* had a patent for an improvement in make object-glasses for telescopes. It was objected that he was not the inventor, "but that Dr. Hall had made the same discovery before him. But it was holden, that as Dr. Hall had confined it *to his closet, and the public was not made acquainted with it*, Dolland was to be considered as the inventor."

The case of Dolland is not reported; and all that we know of it

is what was said by Buller, J., in the case of *Boulton* v. *Bell*. 2 *H. Bc.*, 463 – '4 ; and upon that foundation is probably built the broad doctrine that the first of the two original inventors who communicate the invention to the public is entitled to the patent, although the other invented the thing first.

Between *simultaneous* inventions, this may be just, because neither can claim priority, but it cannot be just that the prior inventor, who is maturing his invention, and preparing to make application for a patent in a reasonable time, should be defeated by a subsequent inventor who first obtains a patent. This is not the doctrine of Dolland's case, which was only that an inventor *who confines his invention to his closet*, and does not communicate it to the public, and takes no steps towards obtaining a patent until a subsequent original inventor has obtained his patent, thereby forfeits and abandons his claim to priority of invention. But the question of forfeiture or abandonment is for the jury, upon a trial at law. The first inventor is *primâ facie* entitled to a patent, and the Commissioner, as before observed, is bound to issue it under the 7th section of the act of 1836, if certain facts should not appear to the Commissioner as therein specified ; which specification of facts does not include *delay* or *abandonment* ; so that the question of delay or abandonment is not, by that section, submitted to the jurisdiction of the Commissioner.

I do not consider the expression " reduced to practice " as importing the bringing the invention into use. When applied to an invention, it generally means the reducing it into such form that it may be used, so as not to be a mere theory. If a machine be invented and described in such a manner that it may be made and used, and especially if a model be made, the invention may be said to be reduced to practice. In the present case, it is admitted in argument (and such is the evidence) that Mr. Heath, in the summer of 1836, actually made a lock gate according to his specification. It was, indeed, a small one, a model only, but the size is of no importance. The thing was done ; the invention was reduced to practice ; and it was demonstrated thereby that the invention was practicable.

I am, therefore, and for the reasons before stated, of opinion that where the invention is not of a mere philosophical speculation, abstraction, or theory, but of something corporeal, something to be *manufactured*, the applicant need not show that he has reduced his invention to practice otherwise than by filing his specification and

furnishing drawings and a model, as required by the statute, where the nature of the case admits of drawings or of a representation by a model. These having been thus filed and furnished by Mr. Heath, and it being admitted that he, in point of time, was the *first* inventor of the thing patented, he is entitled to a patent therefor notwithstanding the patent granted to Mr. Hildreth, unless he has lost his right by not filing a *caveat*, or by delay in applying for his patent.

2. The second reason of appeal is, that Mr. Heath never filed a caveat, pursuant to the 12th section of the act of July 4, 1836.

That section was introduced for the benefit of the inventor, but was not necessary to the preservation of his right. It only enables him to have notice of any interfering application.

Godson (Law of Patents, 146) says: "Of its nature and effect much misconception has arisen. It does not create any right, but is simply a request to be *favored* with information." Again, he says: "Upon the whole, therefore, the entering of a *caveat* is nothing more than giving information that there is an invention nearly completed, and requesting that, if any other person should apply for a patent for the same thing, the preference may be given to him who entered it, which request is complied with by the *courtesy* of the crown, upon its being satisfied of its reasonableness by the attorney-general, or the opinion of the lord chancellor; and when the patent is granted, it is to be judged of as if no *caveat* had been entered."

But this *caveat* gives no notice to the world, or even to the interfering applicant. It is notice to the Commissioner only; and is locked up in the secret and confidential archives of the office. It would not in any manner have strengthened the title of Mr. Heath; nor does the omission of it impair that title, or aid that of Mr. Hildreth.

This reason of appeal, therefore, as well as the first, must be overruled.

3. The statute does not limit any time in which the inventor must apply for a patent; nor does it declare a forfeiture by reason of any delay. The delay, therefore, seems to be unimportant, unless it amounts to evidence of abandonment of the claim. It is not one of the specified grounds for which the Commissioner is, by the 7th section of the act of 1836, authorized to refuse to grant the patent; and it seems to be a matter within the peculiar province of the jury upon a trial at law, in any action which either of the patentees may institute against the other. If there be any limit of the time of applica-

tion, it must be a reasonable limit, and that is proper matter for the consideration of a jury ; and I am very much inclined to the opinion, that any matter of defence which it is the peculiar province of a jury to decide, and which is not by the 7th section of the act of 1836, made a ground for the refusal of a patent by the Commissioner, should be left by him to be decided by the jury in a subsequent action at law.

In *Morris* v. *Huntingdon*, 1 Paine 354, Mr. JUSTICE THOMPSON said: "No man is to be permitted to lie by *for years* and then take out a patent. If he has been practising his invention with a view of improving it, and thereby rendering it a greater benefit to the public before taking out a patent, *that ought not to prejudice him ;* but it should always be a question *submitted* to the jury, what was the intent of the delay of the patent, and whether the *allowing* the invention to be used without a patent, should not be considered an abandonment, or present of it to the public ? "

In *Pennock & Sellers* v. *Dialogue*, 2 Peters 16, Mr. JUSTICE STORY, in delivering the opinion of the court, says: "It has not been, and indeed cannot be, denied, that an inventor may abandon his invention and surrender or dedicate it to the public." "The question which generally arises at trials is a question of fact, rather than of law, whether the acts of acquiescence of the party furnish, in the given case, satisfactory proof of an abandonment, or dedication of the invention to the public." The point decided by the court in that case, was "that the first inventor cannot acquire a good title to a patent, if he *suffers* the thing invented to go into public use, or to be publicly sold for use, before he makes application for a patent." But it is believed that it has not yet been decided that the right of the first inventor has been lost merely by lapse of time between the invention and application for the patent, unless there has been some intermediate use by the applicant, or by his consent ; and especially where he was *bonâ fide* taking measures to improve or perfect his invention, and to prepare for applying for the patent; which, from the evidence, appears to have been the case of Mr. Heath.

If, therefore, the question of abandonment be cognizable by the Commissioner, there is, in my opinion, no evidence to support it ; and this reason of appeal must also be overruled.

It is, therefore, upon the whole case, my opinion, and I do so decide and adjudge, that the decision of the Commissioner of Patents in this cause be, and it is hereby, affirmed.

Certified by me, this 15th of October, 1841. W. CRANCH.

DISTRICT OF COLUMBIA, *to wit :*

I, William Cranch, Chief Justice of the District of Columbia, certify to the Commissioner of Patents, that, upon the appeal of George W. Hildreth from the decision of the Commissioner of Patents, upon the application of George Heath for a patent for hydraulic gates for canal locks, &c., on the 4th of September, 1841, I ordered notice to be given to the parties to appear before me on the last Monday of September, 1841, for the hearing of the said appeal; at which time the said George W. Hildreth appeared by Thomas P. Jones, Esq., and the said George Heath by Mr. Fitzgerald, and submitted the case to my consideration upon the evidence and the reasons of appeal, and the argument of the counsel of Mr. Hildreth, and the grounds of the decision of the said Commissioner, fully set forth in writing: all which being duly heard and considered, I have decided, and do hereby decide and adjudge, that the decision of the said Commissioner of Patents — that the said George Heath is the original and first inventor of the matter for which he has applied for a patent, and is entitled, as such, to receive the patent for which he has applied — be, and the same is hereby, affirmed.

Given under my hand, this 15th of October, 1841.

W. CRANCH.

I herewith return all the papers.

W. CRANCH.

JOHN ARNOLD, appellant,
vs.
GEO. G. BISHOP, & JOHN AKIN, appellees.
} Appeal from the decision of the Commissioner of Patents.

On the 19th of September, 1840, John Arnold made application for a patent for his invention of a "new and useful manner for forming the web of felt cloth and web for other purposes," and in October following complied with the other requisites of the act of the 4th July, 1836. A caveat, however, had been entered by George G. Bishop and John Akin, who claimed to be joint inventors with the said John Arnold of the same machine; and on the 20th of March, 1841, the said Bishop and Akin made application by petition for a patent for the same invention in the name of the said Bishop, Akin, and John Arnold, averring it to be the joint invention of the three.

The Commissioner, on the 30th of March, 1841, decided them to be interfering claims, and notice was given to the parties by the Commissioner that he would hear them on the second Monday in May, 1841, and they respectively took the depositions of several witnesses.

On the 16th of June, 1841, the Commissioner decided that it was to be considered a joint invention, and that neither of the parties can claim the whole, and rejected the applications of all the applicants. From this decision, Mr. Arnold has appealed, and the reasons stated are in effect: That the Commissioner has considered and acted upon evidence not competent according to the general rules of law, and upon testimony not taken according to the regulations prescribed and promulgated by himself; and that, independent of the evidence thus objected to, there is not sufficient to establish the fact of *joint* invention. And Mr. Arnold's attorney asks leave to be further heard if his objections to the evidence should be overruled.

The evidence objected to consists of —

1. John Akin's ex parte affidavit in support of the same joint claim.

3. Letters from Mr. Rowley to the Commissioner of Patents, dated respectively March 15, May 2, and June 9, 1841.

4. George G. Bishop's letters to the Commissioner of 7th of May and 12th June, 1841.

5. Mr. Rowley's deposition.

One of the objections to the deposition of Mr. Rowley is, that the Commissioner of Deeds, before whom the deposition was taken, has not (ified upon the deposition, according to the 5th rule, that it was aled up by him; and there is no evidence that it was *in fact* sea up by him.

By the act of March 3, 1839, § 12, it is enacted, "That the Commissioner of Patents shall have power to make all such regulations, in respect to he taking of evidence to be used in *contested* cases before him, as may be just and reasonable."

Under this authority, the Commissioner made out and promulgated the following rules:

RULES FOR TAKING AND TRANSMITTING EVIDENCE, &c., TO THE COMMISSIONER OF PATENTS.

PATENT OFFICE,

1st. That all statements, declarations, evidence, &c., shall be in

writing, setting forth, minutely and particularly, the point or points at issue, and shall be verified by oath or affirmation.

2d. That all statements, declarations, proofs, and evidence, shall be filed in the Patent Office, by the parties respectively, before the day of hearing.

3d. That, before the deposition of a witness or witnesses be taken by either party, notice should be given to the opposite party of the time and place when and where such deposition or depositions will be taken; so that the opposite party, either in person or by attorney, shall have full opportunity to cross-examine the witness or witnesses. And such notice shall, *with proof of service of the same*, be attached to the deposition or depositions, whether the party cross-examine or not; and such notice shall be given in sufficient time for the appearance of the opposite party, and for the transmission of the evidence to the Patent Office before the day of hearing.

4th. That no evidence, statement, or declaration, touching the matter at issue, will be *considered* upon the said day of hearing, which shall not have been taken and filed in compliance with these rules: *Provided*, That if either party shall be unable, from good and sufficient reasons, to procure the testimony of a witness or witnesses, within the above stipulated time, then it shall be the duty of said party to give notice of the same to the Commissioner of Patents, accompanied with statements of the cause of such inability, which last mentioned notice to the Commissioner shall be received by him days previous to the day of hearing aforesaid, viz.: the day of next.

5th. That all evidence, &c., shall be sealed up and addressed to the Commissioner of Patents, by the persons before whom it shall be taken, and so certified thereon.

The first of these rules is evidently intended to apply to the initiatory proceedings in applications for patents, and to uncontested cases, where the Commissioner may consider all the circumstances which may come to his knowledge. The other rules, viz.: the 2d, 3d, 4th, and 5th, are applicable to contested cases, where parties are to be heard; and in such cases, inasmuch as each party is bound by the rules, each party is also entitled to the benefit of them. The 4th rule says: "That no evidence, statement, or declaration, touching the matter at *issue*, will be considered upon the said day of hearing which shall not have been taken and filed in compliance with

these rules." This is a restraint imposed upon the Commissioner himself as much as if the very words of the rule had been contained in the statute; for the rules, made in conformity with the law, while they remain unabrogated, are as binding as the law itself. The rule is an assurance, an engagement, by the Commissioner, that he will not, at the hearing, *consider* any evidence not taken and filed in compliance with these rules; one of which was that the person taking the deposition should certify thereon that it was sealed up by him. This is not an immaterial form. It is a security that the deposition has not been altered after it left the hands of the magistrate before whom the deposition was taken. In the rules which the Commissioner has promulgated, he has not reserved any right to dispense with them, in particular cases, at his pleasure. After a deposition has been taken while the rules were in force, his dispensation cannot affect that deposition. A revocation of the rules can affect only subsequent proceedings. After a contest has arisen, the parties have a right to insist not only that the evidence should be taken agreeably to the rules prescribed by the Commissioner, but that it should be evidence competent in law. It is one of the rules in law, that no man can be a witness in his own cause, unless made competent by statute, or by being called upon by the opposing party to answer upon oath, as in cases of equity and admiralty jurisdiction, &c.

If the witness is interested he is excluded, however small the amount of interest may be.

Objection was made to the taking of the deposition of Mr. Rowley, at the time of taking it, because of his interest, and because the notice was too short; because the magistrate was not named before whom the deposition was taken, and because the time was so late that Mr. Arnold would not have time to take countervailing testimony.

The interest of Mr. Rowley in the patent right is the same, whether the patent should be granted to Mr. Arnold alone, or jointly to the three applicants; for his only interest is as a member of the company to whom all the applicants have bound themselves to convey the patent right when obtained. If the covenants do not cover the claim for a patent, then Mr. Rowley is not interested at all. If they do cover it, then it is immaterial to him which of the claimants obtains the patent.

The objection to the shortness of the notice is answered by the

fact that Mr. Arnold did appear at the time and place, and cross-examined the witness. The lateness of the time is no cause for rejecting the deposition; but it might, perhaps, have been good ground for an application to the Commissioner of Patents to allow further time for taking other testimony which he might deem important in the cause.

But the objection that the magistrate, before whom the deposition was taken, did not certify thereon that it was sealed up by him, is sufficient ground for excluding that deposition from the consideration of the Commissioner of Patents.

This evidence, then, being excluded, there remains only, on the part of Messrs. Bishop and Akin, the deposition of Mr. Lownsberry.

This deposition is admitted to have been taken and transmitted according to the rules; but it is said that it shows Mr. Lownsberry to be so interested as to be an incompetent witness. In that respect, however, he stands on the same ground with Mr. Rowley, and the same answer is applicable to him.

It appears by his deposition that the idea of crossing the wool diagonally was suggested by Mr. Bishop and Mr. McLean, or one of them, before Arnold was applied to, or had any connection with the company in which Lownsberry, Bishop, and McLean was concerned; that, upon the recommendation of Mr Moulton, Bishop, as agent of the company, applied to Arnold to make the necessary machinery, who undertook the work, and was to have one-fifth of the concern; that he made a machine for crossing the wool at right angles, and obtained a patent for it in 1829 or 1830, which was afterwards improved by him and Bishop, who obtained a patent for the improvement in their name; that Bishop frequently, from 1828 to 1837, urged the building of a machine to cross the wool diagonally, to which Mr. Lownsberry was opposed. The machine, however, was built in 1837, by Arnold and Akin, *for the company*, who paid them for building it. It has always been in possession of the company, and owned by them; that the machine is the same spoken of by Alonzo C. Arnold in his deposition, and the model of which was sent to the Patent Office by Bishop, in March, 1841.

That one objection to adopting the diagonal machine was, that it would interfere with a patent machine then in operation at Catskill; but the right-angled machine did not interfere, and made a better article.

That the claim of Bishop and Akin is made for the benefit of the company, and that whether the patent be taken out in the joint names of Bishop, Akin, and Arnold, or of Arnold alone, the benefit of it is to be assigned and transferred to the company under certain covenants, entered into by all of them, to the company; and copies of these covenants are filed with the papers in this cause.

He does not know who invented the machine built by Arnold in 1837, but it is the same mode which had been agitated by Bishop, and occasionally by Arnold during their connection in business. That Akin suggested alterations while the machine in 1837 was putting up, and after it was up, to make it go better; that he did the greater part of the work; cannot explain the alterations, nor the difficulties to be overcome, *but it did not operate at all.* It seems to me that there is enough in this deposition to show that Mr. Arnold was not the sole inventor of the principle of crossing the wool diagonally, or of the machine for reducing that principle to practice; and, if not the sole inventor, he is not entitled to a patent.

There is no claim before me upon this appeal but that of Mr. Arnold. Bishop and Akin have not appealed from the decision of the Commissioner rejecting their joint claim.

It appears by Lownsberry's deposition that the principle or mode of crossing the wool diagonally was suggested and contemplated by Bishop and McLean before Arnold was employed by them to reduce their ideas to practice. The machine did not constitute the whole invention. The next material part of the invention was the principle, i. e., the diagonal motion, which was to distinguish this machine from all other felting machines; and it is the vibratory and rotary motions which produce the diagonal crossing of the wool, which Mr. Arnold claims as his invention, and for which he asks a patent. The man who reduces to practice the theory of another who assists in the reduction of it to practice, cannot be considered as the sole inventor of the machine. Arnold would not have made the machine unless informed by Bishop of the discovery which he had made of the effect of the diagonal crossing of the wool. The invention consisted both of the discovery of the principle and the reduction of it to practice. Neither Bishop nor Arnold, therefore, could be considered as sole inventor. It appears also by the deposition of Henry Lamb, taken by Mr. Arnold, that the machine, when first put up, "*would not go;*" that Akin went up to remedy

the defect, and that the witness afterwards saw it in operation in the fall of 1837, or spring of 1838; and that he never heard Arnold claim the patent right until within a year.

I see nothing in the deposition of Alonzo C. Arnold inconsistent with the facts stated by Mr. Lownsberry in his deposition; but if there were, Alonzo C. Arnold seems, by his own showing, to be interested by the promise of his father, to give him a share in the patent if it should be obtained; for, although afterward, in answer to the leading question, he said the agreement was *abandoned*, yet it is evidence that in the preceding part of his deposition, he thought it depended upon his generosity whether he should have an interest in the patent when obtained. If this interest, however, was not sufficiently certain to exclude his testimony, it cannot fail to have some effect upon his credibility.

But he states that the machine was put in operation in 1837, and his father never spoke with him about getting the patent, now applied for, until the summer of 1840, and after his father had ceased to be a member of the Union manufactory, who claim the benefit of the patent under the agreement before mentioned, if it should be obtained by either or all of the claimants. It may be inferred from this, that so long as he remained a member of the company he did not claim a sole right, or any right to the invention. Another strong argument that he did not claim to be the inventor during those three years, results from his suffering the machine to be set up and used during that period, without taking any steps to secure a patent, when, by the terms of the acts of 1836 and 1839, the use of the machine, with his consent, for two years prior to his application is a bar to his claim.

That fact, indeed, seems to be a bar to all their claims, and to put an end to this controversy; for, if a patent should now be granted to any of them, and an action should be brought by the patentee for a violation of the patent right, it seems that the defendant might defend himself under the 15th section of the act of 1836, and the 7th section of the act of 1839, by showing that the machine had been in public use, with the consent of the patentee, for more than two years prior to the application for the patent.

It is suggested in the reasons of appeal, that if the decision of the Commissioner is sustained, there does not appear to be any possible mode of determining this question; and that it is only by granting the patent to Arnold, that the rights of the individuals

interested, and of the public, can be determined according to the intention of the acts of Congress for the promotion of the useful arts.

But upon comparing the 16th section of the act of 1836 with the 10th section of the act of 1839, it will appear that, "in all cases where patents are refused, for any reason whatever, either by the Commissioner of Patents, or by the chief justice of the District of Columbia, upon appeals from the decision of said Commissioner," the "applicant may have remedy by bill in equity; and the court having cognizance thereof, on notice to adverse parties, and other due proceedings had," "may adjudge that such applicant is entitled, according to the principles and provisions of the act of 1836, to have and receive a patent, for his invention, as specified in his claim;" "and such adjudication, if it be in favor of the right of such applicant, shall authorize the Commissioner to issue such patent on his filing a copy of the adjudication, and otherwise complying with the requisitions of that act.

The reservation of a right to a further hearing on the part of Mr. Arnold's attorney, was confined to the case of my admitting the evidence which he objected to; and, as I have rejected that evidence, any further hearing is unnecessary.

Upon the whole, then, after rejecting the evidence, I am of opinion that Mr. Arnold has not supported his claim as sole inventor; and that if he had, he has lost his right to a patent, by suffering the machine to be in use for more than two years before his application for a patent; and that, therefore, and upon both grounds, the decision of the Commissioner of Patents, rejecting his claim, ought to be, and it is hereby affirmed.

W. CRANCH.

October 29, 1841.

Subsequent to this decision of the honorable judge, he transmitted a second opinion to the office, in the following words:

JOHN ARNOLD, appellant,
vs.
GEORGE G. BISHOP and JOHN AKIN, appellees.

Appeal from the decision of the Commissioner of Patents.

After I had sent my opinion in this case to the Commissioner of Patents, on the 30th of October last, I was satisfied that I had mis-

apprehended the attorney of Mr. Arnold, in supposing that, in case I should sustain his objections to the testimony and evidence on the part of the appellees, he would not desire to be further heard, I therefore determined to hear his further argument, on the 20th instant, at my chambers, of which I gave notice to the attorneys of the parties, and they attended, viz: Doctor Jones on the part of the appellant, and Mr. Morfit on the part of the appellees. Mr. Fitzgerald also attended on behalf of the Patent Office, to give any explanations, &c., which might be required. Doctor Jones then presented his further argument, in writing, in which he contended that this claim of Mr. Arnold for a patent is not included in the covenant to the Union Manufacturing Company, of which Mr. Lownsberry is a member; and, therefore, that the interest of Mr. Lownsberry "cannot be the same whether the patent should be granted to Arnold or to the three applicants."

I cannot, however, perceive how that consequence should follow. It is only by introducing the assignments and covenants by Mr. Arnold to the Union Manufacturing Company, and by showing that these covenants cover this claim, that Mr. Lownsberry is supposed to be interested.

If those covenants do not cover this claim, then Mr. Lownsberry is not interested; and if they do, then, as all the applicants are bound by similar covenants, it is not material to him which prevails.

The only question for me to decide is that which is suggested by the reasons of appeal, viz: whether Mr. Arnold was the sole inventor of the machine.

To that question it is wholly immaterial whether it be an entirely new machine, or an improvement upon an old one.

Upon a careful review of the depositions of Alonzo C. Arnold, Mr. Waters, and Mr. Lamb, taken on the part of the appellant, and of that of Mr. Lownsberry, on the part of the appellee, I am still of opinion that Mr. Arnold has not supported his claim as sole inventor.

But it is suggested that there is no law which authorizes the Commissioner of Patents to withhold the grant of a patent, in the case in question, that is, where the applicant is not the sole inventor; that it is not one of the grounds, stated in the 7th section of the act of 1836, which would justify the Commissioner in refusing the patent; and that the only one of these grounds which can be sup-

posed to apply to this case is, its appearing to the Commissioner that the same thing had been invented or discovered by some other person *prior* to the alleged invention or discovery by the applicant.

But by the sixth section of the same act, the applicant must be the *inventor*. One of the three joint inventors cannot with propriety be called *the* inventor; and if he applies for the patent, the Commissioner is bound to refuse it. This seems to be admitted in the reasons of appeal, where it is said that Arnold, who has sworn that he was the original and first inventor, cannot, without admitting that he has been guilty of perjury, acknowledge that Bishop and Akin were joint inventors with him; and that, upon their own showing, a patent cannot be granted to Bishop and Akin without the concurrence of Arnold.

Here, then, is the authority of the Commissioner to withhold a patent from an applicant who is not the sole inventor.

In my former opinion in this case, I stated as one of the grounds for affirming the decision of the Commissioner of Patents rejecting the claim of Mr. Arnold, that he had lost his right, if he had any, by suffering the machine to be in use for more than two years before his application for a patent. I should have said "public use," which are the words of the statute. But, upon reflection, I doubt whether I can decide upon any other matter than that which arises upon the *reasons* of appeal. The words of the act of 1839, section eleven, which confer the jurisdiction upon the judge, after allowing the applicant a right to appeal, by giving notice thereof to the Commissioner, filing his reasons of appeal, and paying into the office twenty-five dollars to the credit of the patent fund, are: "and it shall be the duty of the said chief justice, on petition, to hear and determine all such appeals, and to *revise* such decisions in a summary way, on the evidence produced before the Commissioner, at such early and convenient time as he may appoint, first notifying the Commissioner of the time and place of hearing; whose duty it shall be to give notice thereof to all parties who appear to be interested therein, in such manner as said judge shall prescribe. The Commissioner shall also lay before the judge all the original papers and evidence in the case, together with the grounds of his decision, fully set forth in writing, *touching all the points involved in the reasons of appeal* TO WHICH THE REVISION SHALL BE CONFINED," i. e., the revision by the judge shall be confined *to the points involved in the reasons of appeal.* He is to "*hear and de-*

termine such appeals," but he is to revise the decision of the Commissioner only in respect to the points involved in the reasons of appeal. If the Commissioner did not err in *those* points, his decision upon those points must be affirmed, although the judge should be of opinion, upon the evidence and the merits of the whole case, that the patent ought to have been granted ; so, if the judge should reverse the decision of the Commissioner upon those points, *it would seem* that the patent must issue, although the judge should be of opinion that upon the whole case, as it appears in evidence before him, the patent ought not to issue. I say this would *seem* to be the effect of such a decision ; because the effect of such a decision upon the further proceedings of the Commissioner would depend upon the question, whether the reasons of appeal thus affirmed, by the judge, involved the merits of the case. If they did not, the Commissioner might well say : it is true, I erred in those points, but my objections to the issuing of the patent still exist untouched by the decision of the judge. The words of the act are, that the judge's decision "*shall govern the further proceedings of the Commissioner in such case.*" This must apply only to so much of the case as is involved in the reasons of appeal ; and the appeal itself can be considered only as an appeal to so much of the decision of the Commissioner as is effected by such reasons. If, therefore, after the judge shall have decided in favor of the applicant upon the points involved in his reasons of appeal, other sufficient reasons remain for rejecting the claim for a patent, untouched by the decision of the judge, it would seem that the Commissioner might properly still reject it.

Whether such new rejection would be subject to appeal, is a question which may be left, as well as the effect of the judgment of the judge in regard to the subsequent proceedings of the Commissioner, to future decision, as cases may arise requiring a decision upon those points. For these reasons, I doubt very much, whether it was competent for me to decide in this case, that Mr. Arnold has lost his right to a patent by suffering the machine to be in public use for more than two years before his application for a patent. So much, therefore, of my former opinion in this case may be considered as *extra judicial and as withdrawn.* This renders it unnecessary to answer the very ingenious argument of Mr. Arnold's attorney upon that point ; which argument, however, has not in any degree diminished my confidence in the correctness of the opinion which I have thus withdrawn. This withdrawal does not in any manner affect the judgment which I cer-

tified on the 29th of October, 1841, inasmuch as I am still of opinion that Mr. Arnold has not supported his claim as the sole inventor of the machine for which he claims a patent.

The judgment, therefore, rendered by me, and certified on the 29th of October last, must stand as my final decision in the case.

W. CRANCH.

November 25, 1841.

Judgment in the Case.

DISTRICT OF COLUMBIA, *to wit:*

JOHN ARNOLD, appellant, *vs.* GEO. G. BISHOP and JOHN AKIN, appellees. } Upon appeal from the Commissioner of Patents, rejecting the application of John Arnold for a patent for his invention of "a new and useful machine for forming the web of felt cloth, and web for other purposes."

I, William Cranch, chief justice of the District of Columbia, certify to the honorable the Commissioner of Patents, that on the 4th Monday of October, 1841, the day appointed by me therefor, the parties appeared before me, namely: the said John Arnold, by his attorney, Dr. Thomas P. Jones, and the said appellees, by Mr. Morfit, and submitted the said case to my consideration, upon the petition of the said John Arnold and the statement of the reasons of appeal, and upon the original papers and evidence in the case, and the grounds of the Commissioner's decision therein fully set forth in writing, touching all the points involved in the reasons of appeal; and that the same having been duly considered,

I do decide and adjudge, that the decision of the said Commissioner of Patents, rejecting the application of the said John Arnold for a patent for the invention aforesaid, be, and the same is hereby, affirmed; and I herewith return all the papers in the cause.

W. CRANCH.

WASHINGTON, *October* 29, 1841.

AT CHAMBERS, *Nov.* 21, 1842.

RALPH POMEROY, appellant,
ALEX. CONNISON, appellee,

Alexander Connison applied for a Patent.

The Commissioner of Patents being of opinion that the patent applied for would, if granted, interfere with a prior unexpired patent to Ralph Pomeroy, granted on the 24th of January, 1841, gave him notice thereof, under the 8th section of the act of July 4, 1836, chap. 357, vol. 8, p. 549, and he appeared before the Commissioner of Patents and contested the right of Mr. Connison, who claimed to be the first inventor. The Commissioner, on the 25th of July, 1842, decided "that a patent ought to issue to Alexander Connison, as the first original inventor, and that the same be accordingly issued, unless an appeal be entered within ten days."

From this decision Mr. Pomeroy appealed, and filed his reasons of appeal.

The Commissioner has laid before the Judge the grounds of his decision in writing, with the original papers, and the evidence in the cause.

The first question is, has the Judge jurisdiction upon this appeal from the decision of the Commissioner, not *rejecting* but *granting* the application?

In no other case under the patent laws can an appeal be taken from the decision of the Commissioner, unless the application for a patent has been rejected by him.

In no other case can an appeal be taken to the granting of a patent; and the reason for giving an appeal from the rejection of an application for a patent, and not giving an appeal from the granting of a patent, is, that the applicant whose application is rejected has no remedy. He cannot go into a court of law or of equity to obtain a patent; nor can he maintain any action for the use of his invention. But if the Commissioner should grant a patent erroneously, its validity may be tried; and any person interested may defeat it by a suit at law or in equity.

The general object of giving an appeal under the patent laws, therefore, is to correct the error of the Commissioner in *refusing* to grant the patent applied for. His error in *granting* a patent is corrected by the ordinary tribunals of the country; and there was no need of a special tribunal for that purpose.

This general object seems to me to govern all the provisions of the laws upon this subject, and ought to be taken into consideration in their construction.

Thus in the 7th section of the act of July 4, 1836, "if the specification and claim shall not have been so modified as, in the opinion of the Commissioner, shall entitle the applicant to a patent, he may on appeal, and upon request in writing, have the decision of a board of examiners," &c., who may reverse the decision of the Commissioner. And by the 16th section, the remedy given by bill in equity is confined to the case of two interfering patents, and to the *refusal* of the board of examiners to grant a patent. The provisions of this section are, by the 10th section of the act of 1839, extended to all cases where patents are *refused*, for any reason whatever, by the Commissioner of Patents or by the Judge, &c.

The proceedings before the Commissioner and before the Judge by appeals are all *initiatory* — all relating to the question, whether a patent shall issue; they cannot effect a patent already issued. Such are the provisions of the act of 1836, sections 5, 6, 7, 8, 9, 10, 11, 12, and 16, and of the act of 1839, sections 10 and 11.

There is no section or clause of either of the acts which gives a *patentee* a right of appeal from the decision of the Commissioner granting a patent to another person, unless that right be given by the 8th section of the act of 1836.

By that section it is enacted "That whenever an application shall be made for a patent, which, in the opinion of the Commissioner, would interfere with any other patent for which an application may be pending, or with any unexpired patent which shall have been granted, it shall be the duty of the Commissioner to give notice *thereof to such applicant*, or patentee, as the case may be; and if *either* shall be dissatisfied with the decision of the Commissioner, on the question of priority of right or invention, on a hearing thereof, he may appeal from such decision, on the like terms and conditions as are provided in the preceding section of this act; and the like proceedings shall be had to determine which or whether either of the applicants is entitled to receive a patent as prayed for."

The power and jurisdiction given by the patent laws to the board of examiners and to the judge are special and limited, and must be construed and exercised strictly. The judge can only decide such questions, and render such judgment as he is expressly authorized by the statutes to decide and render. In the case stated in the 8th sec-

tion of the act of 1836 the judge is only "to determine which or whether either of the applicants is entitled to receive a patent as *prayed for*." He can only act in a case where there are *contending applicants* for a patent, and those applicants must have "*prayed for*" a patent. A *patentee* is not an *applicant*. He has already obtained all he asked for. If his patent can be supported at law, he has nothing to fear. The grant of a subsequent patent erroneously to another cannot affect the validity of his patent. The judge is to determine which or whether either of the applicants is entitled "to *receive*" a patent. It would be absurd to say that a *patentee* is entitled to *receive* the patent after he has already received it.

It is true that the 8th section, after speaking of *applicants* and *patentees*, says, if *either* shall be dissatisfied, he may appeal. The word "*either*" may be satisfied by applying it to the words "*such applicants;*" i. e. "*either*" of "*such applicants.*" And that such was the understanding of the legislature seems probable, from the fact that they have only authorized the judge to determine between contending applicants, and not between an applicant and a patentee; for when they come to say what the judge is to do upon the appeal, we find it is "to determine which or whether *either of the applicants* is entitled to *receive* a patent as *prayed for.*" The word "*either*" in the former parts of the clause is here explained to mean either of the applicants. It cannot be contended that the judge is to decide whether a patentee is entitled to receive a patent which he has already received, and which he still has in his possession.

This construction of this section is corroborated by the reference to it in the 11th section, which gives a right to file a *caveat;* and where it is said, that "if in the opinion of the Commissioner the specifications of claim interfere with each other, like proceedings may be had in all respects as are provided in the case of interfering *applications,*" (*i. e.*, in the 8th section.)

The 16th section seems to give the remedy in a case of interfering patents, which this will be if the Commissioner shall issue a patent to Mr. Connison. It also provides for the case where a patent is *refused* by the board of examiners, on the ground that it would interfere with an unexpired patent; and the provisions of this section are extended by the 10th section of the act of 1839, to all cases of *refusal* by the Commissioner or the Judge.

When the patent has issued, the jurisdiction of the Commissioner is exhausted. He has no further control over it, except in the case

provided for in the 13th section of the act of 1836, where the patent is inoperative or invalid by reason of a defective or insufficient description. An adjudication upon it by the Commissioner or the Judge has no effect upon a patent already granted, and is entirely inoperative as to the rights of the parties, unless the decision be *against the applicant*, against whom it would be conclusive, unless an appeal were given by the statute. He could apply to no other tribunal. But as to the *patentee*, a decision against *him* would be a *brutum fulmen;* and if the second patentee should do any act under his patent to the supposed injury of the first patentee, *he* would have a right of action, and might maintain the validity of his patent in the same manner and to the same effect as if the second patent had not issued. When the Commissioner inquires as to the relative priority of invention between the applicant and the patentee, it is only for the purpose of setting aside the patent already granted, over which he has no control. The decision of the Commissioner does not affect the patentee if his patent is valid, and if it is invalid, he has no right to complain.

There was no necessity, therefore, that the patentee should have a right to appeal from the decision of the Commissioner, which could have no effect upon his rights. This is a sufficient reason why the legislature should not give him a right to appeal in such a case. He has already abundant means of redress, both at law and in equity, if his patent is valid, and should be violated; and this accounts for the restraining the action of the Judge to the case of contending applicants.

An appeal is given to a disappointed applicant, because otherwise the decision of the Commissioner would be conclusive against him. It is not given to the patentee, because the decision of the Commissioner is not only conclusive as to him, but does not in any manner affect his legal or equitable rights; and if the patent should be issued to Mr. Connison by the Commissioner, the act of 1836, section 16, expressly gives him a remedy in equity where he may have the benefit of the oath of the second patentee, in addition to all legal evidence taken according to the rules of a court of equity, which has power and jurisdiction to act effectually in the case, and to adjudge either of the patents to be void; or, if he does not like the remedy by bill in equity, he may bring an action at law for a violation of his patent; in which case, its validity may be tried and decided. In either of these cases, his remedy is full and conclusive, whereas

if he were to have an appeal, he would not thereby have any conclusive or effectual remedy, for, if upon such appeal he should prevail in reversing the decision of the Commissioner, the reversing decision would not be final and conclusive upon Mr. Connison. He would still have his remedy upon a bill in equity, under the same 16th section.

I am, therefore, of opinion that the legislature designedly limited the authority of the judge to the decision of the question, "which or whether either of the applicants is entitled to receive a patent as prayed for;" and that as, in this case, there is only one applicant, I have no jurisdiction in it under the 8th section of the act of 1836.

The only other case of appeal provided for in the statutes, is where the application for a patent is rejected; and as the application of Mr. Connison was not rejected, but sustained, I have no jurisdiction of the appeal of Mr. Pomeroy, who is not an *applicant*.

Believing that I have no jurisdiction in this case, and that Mr. Pomeroy has all his rights and remedies reserved to him by the statutes upon this subject, I shall return the papers to the Patent Office with a certificate of the substance of this opinion.

W. CRANCH.

NOVEMBER 22, 1842.

BENJAMIN M. SMITH, appellant
vs.
FLICKENGER and KRIM, appellees. } Appeal from Commissioner of Patents.

Mr. Smith was an applicant for a patent for a machine for separating garlic from wheat.

The Commissioner being of opinion that it would interfere with a patent already granted to Flickenger & Krim, gave notice thereof to the applicant and patentees, as required by the act of Congress of the 4th of July, 1836, ch. 357, sec. 8, and assigned the 19th of December, 1842, for hearing the parties upon the question of priority of invention. Upon that day it appeared that the depositions on the part of the applicant, Mr. Smith, were taken and transmitted in due form, according to the regulations which the Commissioner

of Patents had (by virtue of the 12th sec. of the act of Congress of the 3d of March, 1839,) made "in respect to the taking of evidence to be used in contested cases before him." The depositions on the part of the patentees, Flickenger & Krim, were correctly taken, but not transmitted in the form required by these regulations, and, therefore, according to the Commissioner's 4th rule, could not be *considered* by him upon the day assigned for hearings touching the matter at issue. But as it appeared to the Commissioner that the facts stated in the depositions thus informally transmitted would, but for that informality, clearly show that the applicant was not the first and original inventor, he postponed the hearing to the 27th of February, 1843; of which he gave to Mr. Smith the following notice:

"PATENT OFFICE, *December* 20, 1842.

"The day of hearing in the matter of interference between your claims and those of Messrs. Flickenger & Krim has been postponed to the 27th of February, 1843, the evidence on their part being informal in the manner of transmission to the Commissioner of Patents. The case is open for the reception of further evidence taken and transmitted according to the rules in the enclosed circular.

"Respectfully, yours,

"H. L. ELLSWORTH."

The circular referred to is as follows:

"PATENT OFFICE.

"*Rules for taking and transmitting evidence, &c., to the Commissioner of Patents.*

"1st. That all statements, declarations, evidence, &c., shall be in writing, setting forth minutely and particularly the point or points at issue; and shall be verified by oath or affirmation.

"2d. That all statements, declarations, proofs, and evidence shall be filed in the Patent Office by the parties, respectively, before the day of hearing.

"3d. That before the deposition of a witness or witnesses be taken by either party, notice shall be given to the opposite party of the time and place when and where such deposition or deposi-

tions will be taken, so that the opposite party, either in person or by attorney, shall have full opportunity to cross-examine the witness or witnesses. And such notice shall, *with proof of service of the same*, be attached to the deposition or depositions, whether the party cross-examine or not; and such notice shall be given in sufficient time for the appearance of the opposite party, and for the transmission of the evidence to the Patent Office before the day of hearing.

"4th. That no evidence, statement, or declaration touching the matter at issue will be *considered* upon the said day of hearing which shall not have been taken and filed in compliance with these rules: Provided, that if either party shall be unable, from good and sufficient reasons, to procure the testimony of a witness or witnesses within the above stipulated time, then it shall be the duty of said party to give notice of the same to the Commissioner of Patents, accompanied with statements of the cause of such inability, which last mentioned notice to the Commissioner shall be received by him —— days previous to the day of hearing aforesaid, viz: the —— day of —— next.

"5th. That all evidence, &c., shall be sealed up and transmitted to the Commissioner of Patents by the persons before whom it shall be taken, and so certified thereon.

"———— ————,
"*Commissioner of Patents.*"

At the hearing on the 27th of February, 1843, the depositions on the part of the patentees, Flickenger & Krim, having been regularly taken and transmitted, they were considered with the other evidence in the case by the Commissioner, who thereupon made the following decision:

"In the matter of interference between the claims of Benj'n M. Smith, of Massillon, Stark county, Ohio, and Messrs. Daniel Flickenger and Sebastian Krim, of Hanover, York county, Pennsylvania, for an alleged improvement in separating garlic from wheat by means of elastic rollers, &c.

PATENT OFFICE, *Feb.* 28, 1843.

"This case came up for hearing on the 27th instant, and on examination of the evidence on the part of Messrs. Flickenger and

Krim, it appears that he invented and constructed a machine for separating garlic from wheat, by passing the grain between elastic rollers, in the year 1835. On the part of Benj'n M. Smith, it appears that he first invented a similar machine in the year 1837. The testimony on both sides being duly taken and transmitted to this office, it is hereby decided that Messrs. Flickenger and Krim are the first and original inventors of the said improvement, and, as such, entitled to their patent.

"H. L. ELLSWORTH."

From this decision Mr. Smith has appealed, and filed his reasons of appeal, with a petition that it may be heard and determined.

Those reasons of appeal are —

1st. That the Commissioner could not lawfully postpone the hearing of the case from the 19th of December, 1842, to the 27th of February, 1843, on account of any thing appearing in the depositions which had been informally transmitted; because, by the 4th of the rules which he had made in respect to the taking of evidence to be used in contested cases before him, he had precluded himself from *considering* any "evidence, statement, or declaration," "upon the day of hearing, which shall not have been taken and filed in compliance with these rules," unless in the case provided for in that rule, which case is not applicable to these patentees.

The applicant contends that it was his *right* to have the case decided on the 19th of December, 1842, (the day assigned for the hearing,) upon such legal and competent evidence as was *then* before the Commissioner, who had no authority to postpone the hearing without the consent of the applicant, upon any ground appearing in the depositions informally transmitted.

2. The second reason of appeal is, "that the appellees did not give a sufficient time for the appearance of the opposite party to cross-examine the witness, as required by the rules for taking evidence; and therefore the deposition taken by the appellees on the 23d of February, 1843, is not legal, and should not have been entertained in deciding the case; for the appellant would have been required to travel 400 miles in three days to appear at the time appointed for taking the evidence, which is obviously impossible."

These are all the reasons of appeal alleged by the appellant, and

to these the "revision" is expressly required to be "confined," and the appellant says, at the close of his first reasons of appeal, that he has foreborne to go into the *merits* "of the two claims at this time, because he considered his right to a patent, under the rules as fully substantiated, and prefers deciding the validity of the former patent before a jury."

The grounds of the Commissioner's decision, which he is required by the 11th section of the act of March 3d, 1839, fully to set forth in writing, are to be confined to the points involved in the reasons of appeal.

As to the first reason of appeal — the postponement of the hearing — he says that, "upon examination of the papers, the affidavits clearly showed that Mr. Smith was not the first and original inventor." That "the affidavits to show this were duly taken, but not duly transmitted." That this fact was presented "to his consideration by the examiner, and that having a due regard to the public interest, he postponed the case to a future day, giving both parties the opportunity to procure further testimony, if they thought proper," of which he gave notice to Mr. Smith by the letter produced by him with his reasons of appeal. That "no motion of the opposite party was filed for postponement," and "that he adopted that course to further the ends of justice."

As to the second reason of appeal, that sufficient time was not given to Mr. Smith, the appellant, to be present at the taking of the deposition on the 23d of February, 1843.

The Commissioner says that "this objection did not arise at the time of trial, and should have then been made; but Mr. Smith was anxious to hasten rather than postpone the case, for any cause."

The question arising upon the first reason of appeal is, whether the Commissioner was bound to hear and decide on the merits of the case upon the evidence which was regularly taken and transmitted to him, and which, according to his rule for taking and transmitting evidence, he could, on the 19th of December, 1842, have *considered* upon the hearing of the matter at issue, or whether he had a right to postpone the hearing, to enable the patentees to cure an informality in the transmission of their evidence, if he should deem such a postponement necessary to further the ends of justice; giving, at the same time, to both parties, an opportunity to procure further testimony.

The argument of the appellant rests upon the construction of the

fourth of the five rules made by the Commissioner "in respect to the taking of evidence to be used in contested cases before him," which rules were made by virtue of the power given him in the 12th section of the act of March 3d, 1839.

The 4th rule is in these words:

"4th. That no evidence, statement or declaration, touching the matter at issue, shall be *considered* upon the said day of hearing, which shall not have been taken and filed in compliance with the rule: provided, that if either party shall be unable, from good and sufficient reason, to procure the testimony of a witness or witnesses within the above stipulated time, then it shall be the *duty* of said party to give notice of the same to the Commissioner of Patents, accompanied with statements of the cause of such inability; which last mentioned notice to the Commissioner shall be *received* by him ten days previous to the day of hearing aforesaid, viz: the
day of next."

It is contended by the counsel of the appellant, not only that the Commissioner cannot consider the deposition, informally transmitted, as evidence upon the hearing of the matter in issue, but that he cannot look into it for any purpose, and therefore there was no cause whatever for postponing the hearing; and that, for that reason, the decision of the Commissioner upon the merits of the case ought to be reversed.

But the prohibition contained in the rule is not to the Commissioner's *looking into* the deposition thus informally transmitted, or to his reading it and ascertaining its contents; but to his *considering* it on the day of hearing, as evidence touching the matter at issue.

The Commissioner does not *consider* it, upon the day of hearing, as evidence touching the matter at issue, and in that respect complied with his own rule.

The proviso in the 4th rule is applicable only to the case where the party is unable to procure the testimony "in sufficient time for the appearance of the opposite party, and for the transmission of the evidence to the Patent Office before the day of hearing, in which case it shall be the duty of said party to give notice of the same to the Commissioner of Patents." But the rule does not say what the Commissioner shall do in consequence of such notice — whether he shall receive the testimony, although taken without reasonable notice, or whether he shall postpone the hearing — so that if the patentees

had given such notice to the Commissioner he would have still been as much without power to postpone the hearing as he was on the 19th of December, 1842.

The notice therefore would have availed them nothing.

There is nothing in the laws relating to the Patent Office, or in the rules adopted by the Commissioner, to prevent him from postponing the hearing of a cause, if, in his opinion, the justice of the case should require it, and especially for the correcting of an irregularity in matters of form. To deny him this power, would be to stifle justice in her own forms.

2. As to the 2d reason of appeal, viz: that sufficient time was not given to Mr. Smith to be present at the taking of the deposition, taken on the 23d of February, 1843, it is a sufficient answer to say, that the objection was not made at the hearing; but it appears also that the notice was served on Mr. Smith, personally, on the 11th of February, at Massillon, in Stark county, in Ohio, to take the depositions of witnesses at Manhime, in York county, in Pennsylvania, on the 23d of February — eleven days — which seems to be a reasonable time, even if the distance was 400 miles, as suggested in the reasons of appeal.

Upon the whole, therefore, I am of opinion that in this case the alleged reasons of appeal are not sufficient to sustain it, and that the decision of the Commissioner of Patents, as to all the points involved in the said reasons, must be affirmed. W. CRANCH.

March 25, 1843.

BENJAMIN M. SMITH, appellant, *vs.* FLICKENGER and KRIM, appellees, } Upon appeal from the decision of the Commissioner of Patents.

I, William Cranch, chief justice of the District of Columbia, certify to the Hon. H. L. Ellsworth, Commissioner of Patents, that I have considered the reasons of appeal filed by the applicant in this cause, and the grounds of the decision of the said Commissioner upon the points involved in the said reasons, and have heard and considered the argument of the attorney of the applicants.

Whereupon I do decide and adjudge that the said decision of the said Commissioner of Patents, upon the points involved in the said reasons of appeal, be, and the same is hereby, affirmed.

And I herewith return all the papers in the cause, together with the reasons of my opinion. W. CRANCH.

WASHINGTON, D. C., *March* 27, 1843.

JOHN COCHRANE, appellant,

vs.

HENRY WATERMAN, appellee.

Appeal by John Cochrane from the decision of the Commissioner of Patents, refusing to grant him a patent for a machine for steering vessels, styled "the spring tiller self-compensating steering machine."

By the 11th section of the act of the 3d March, 1839, ch. 88, the reversion of the decision of the Commissioner is to be "confined to the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal."

Mr. Cochrane in his specification says: "The nature of my invention consists in applying the endless screw or worm working in cogs on the periphery of a quadrant, to the moving or holding of the rudder; and, also, in the application of springs to compensate for the action of the sea on the rudder."

The Commissioner refused to grant the patent, because as to the first supposed improvement, namely: the application of the endless screw to the cogs on the periphery of a quadrant, it was not the *invention* of an improvement; and as the second improvement, namely: the springs on the tiller, it would interfere with a patent already granted to Henry Waterman.

The reasons of appeal from the decision are, in substance — first, that the application of the endless screw, &c., is an invention of an improvement on the *machinery* of steering vessels, within the meaning of the sixth section of the act of the 4th of July, 1836, ch. 375; and, secondly, that he was the first inventor of the spring-tiller; and, therefore, the patent ought not to have been granted to Waterman, and ought now to be granted to him, Cochrane.

The Commissioner, in stating his reasons for his decision, contends that the substitution of a known mechanical equivalent is not an invention within the patent law; and I think he is right. In some machines the moving power is communicated by a band. If I were to substitute a pinion for the band, I do not think it could be considered as an invention for which I could obtain a *patent.*

A.

Upon the first point, therefore, the decision of the Commissioner is affirmed.

The second question is, whether Mr. Cochrane was the first inventor of the spring-tiller, according to the evidence before the Commissioner?

Upon this point it is necessary to ascertain what the evidence was.

1. James Cochrane testifies in his deposition, taken on the 15th of March, 1844, at Baltimore, "that he knows that the compensating *principle* in the steering machine was invented by John Cochrane, the claimant, by the application of steel springs to the rudder, prior to the 19th day of October, 1835." He "heard him describe their position on the rudder and explain their use, which was to ease off the action of the sea on the rudder, previous to the said 19th of October, 1835."

The endless screw and wheel is a common mechanical power, applicable to an indefinite number of machines, and the mere application of it to a machine, to which it had never before been applied, would not be an *invention*, although it might make the machine better than it would have been without it. There may be innumerable cases in which that mechanical power may be used with great effect; but it does not follow that the person using it is thereby entitled to a patent. The fact that it enables the helmsman to hold and stay the rudder with more ease, results from the nature of the power, and is a property belonging to it wherever used; for the power of the helmsman is applied slowly at the long end of the lever against the power of the rudder, which works at the short end. This property is not now for the first time discovered. The application of it to the steering of vessels seems to be no more entitled to a patent, than if it had been applied to a kitchen-jack for roasting. It seems to me to be an ordinary power applied to an ordinary purpose, and that the application of it is not an invention within the meaning of the patent law.

2. Richard Cochrane in his deposition, taken at Newark, New Jersey, March 16th, 1844, says: "That the *invention was made* in the year 1835, but cannot now recollect any fact by which to ascertain in his own mind the exact date." That part of his deposition, in which he says that "he distinctly remembers that the inventor, John Cochrane, said, years ago, that it was on the 7th of February, at 10 o'clock at night," is not competent evidence in this cause.

The deponent further testifies that he "was present when *the invention was made*, and recollects that it was at night." He further testifies that, "in the month of October, 1835, he had a conversation with Captain Scott, of the brig Planter, of Baltimore, Maryland, on the *principle* on which steering machines *should* act, for the purpose of ascertaining whether the springs were as important in steering as the said John Cochrane supposed; but that he, deponent, is certain that this invention was in existence before said conversation with Captain Scott." He further testifies that "the model deposited at Washington is the same in *substance* or *principle* as when first *invented* by John Cochrane." The letter of Captain Bunker, of the 15th of February, 1843, a copy of which was enclosed in Mr. John Cochrane's letter of the 22d of March, 1844, to the Commissioner of Patents, is not evidence in this cause; and, if it were, it does not give any information as to the priority of invention of the spring-tiller.

All the evidence in favor of the appellant upon that point is contained in the depositions of James and Richard Cochrane, and they do not carry back the date of the invention to any certain time prior to the 19th of October, 1835. The only evidence of Henry Waterman's priority of invention of the spring-tiller is contained in the deposition of Stephen Waterman, who testifies that in *April* or *May*, 1835, he had a conversation with his brother Henry, in relation to the application of springs to the head of the rudder, and again in July, 1839—"*that, at both of said interviews, said Henry Waterman described to deponent his said invention, the same as the one patented to him in Washington.*" That in February, 1843, the deponent being about to go to Washington, Henry Waterman furnished him with a model of his invention. That, being in New York, they called to see Mr. Cochrane's model, and Henry Waterman showed his own model. That the deponent asked Mr. Halstead, who had charge of Mr. Cochrane's model, how long it had been invented? and the deponent thinks he stated in reply, seven or eight years. The deponent annexes to his deposition an original letter from himself to his brother Henry; but it is of no importance.

This deposition appears to have been taken in the presence of Mr. Cochrane, and carries back the date of Waterman's invention of the spring-tiller to April or May, 1835, whereas the date of Mr. Cochrane's invention is not carried back with any degree of certainty beyond the 19th of October, 1835. The Commissioner of Patents,

therefore, was bound, as the case appeared in evidence before him, to refuse to grant a patent to Mr. Cochrane.

Mr. Cochrane, in stating the reasons of his appeal, has alleged that Mr. Waterman obtained his patent *surreptitiously*. There is no evidence to support this charge. The reasons of appeal are extended at great length, and for the most part are founded upon the assumption of facts, of which there was no competent evidence before the Commissioner.

1. There is no evidence that either of the applicants for the patent had reduced the invention of the spring-tiller to practice. The letter of Captain Bunker is not admissible evidence.

2. There is no evidence of the protest of W. W. Kingsley mentioned in the reasons of appeal.

3. There is no evidence that in the interview between the Watermans and Halstead, in New York, in 1843, Henry Waterman said that he invented the spring-tiller "*four or five years ago*," nor that he had never tried it! Nor that Mr. Halstead informed them "that this machine was then on board of two ships, namely: the Alabama and the Vicksburg, and was in operation about six months, and so far appeared to answer well. Nor that "Mr. Cochrane had been at great expense in maturing the invention and in reducing it to practice, and had it in actual operation." Nor that Mr. Waterman had bestowed no labor and gone to no expense upon the invention.

4. There is no evidence that Mr. Waterman claimed to have invented this application of springs, in 1838 or 1839.

5. There is no evidence that Stephen Waterman protested "that if Ellsworth should take back the patent they would enter suit for damages against him."

6. There is no evidence that Richard Cochrane had the books of the brig Planter examined to ascertain the date of the conversation with Captain Scott.

7. What Mr. John Cochrane says, in his reasons of appeal, he told his brother Richard, is not evidence.

8. There is no evidence that James Cochrane stated as a reason for fixing the date of the invention before the 19th October, 1835, that on that day he left Baltimore to reside in Richmond.

9. There is no evidence that Stephen Waterman stated in evidence that Cochrane's "machines were in operation."

10. There is no evidence that Henry Waterman was intentionally assisted by the Patent Office in disregarding the caveat, as insinuated

in the reasons of appeal. Nor is there any evidence that the evidence of one of Mr. Cochrane's witnesses was mutilated, nor that any important evidence was suppressed, nor that a portion of the evidence was passed over without notice, as charged in the reasons of appeal.

All those reasons of appeal, therefore, which were founded on supposed facts, of which there was no evidence, must be disregarded.

The fact that the patent to Mr. Waterman was granted while Mr. Cochrane's *caveat* was pending and in force, does not of itself vacate that patent, nor authorize the Commissioner to grant to Mr. Cochrane a patent unless he should establish his priority of invention.

The Commissioner could act only upon the evidence before him; and I can act only upon the same evidence.

If Mr. Cochrane had other evidence, and did not produce it, it was his own fault, or misfortune; but perhaps he may yet file a bill in equity under the 16th section of the act of Congress of the 4th of July, 1836, and establish his priority and obtain a patent upon consideration of the reasons of appeal, and the reasons of the Commissioner of Patents, for his decision. I am of opinion that the decision is correct, and ought to be affirmed.

W. CRANCH.

November 6, 1844.

DISTRICT OF COLUMBIA, *to wit:*

I, William Cranch, Chief Justice of the District Court of the United States for the District of Columbia, certify to the honorable the Commissioner of Patents, that having caused due notice to be given to the parties interested in the application of John Cochrane for a patent for steering vessels, and of his appeal from the decision of the said Commissioner refusing to grant the said patent, I have considered the reasons of the said appeal filed by the said John Cochrane and the grounds of the decision of the said Commissioner, upon the points involved in the said reasons of appeal. Whereupon I do, this 7th day of November, 1844, decide and adjudge that the said decision of the said Commissioner of Patents, upon the points involved in the said reasons of appeal, be, and the same is hereby confirmed; and I herewith return all papers in the cause.

W. CRANCH.

SOLOMON C. WARNER,

vs.

CHARLES GOODYEAR.

Appeal from the decision of the Commissioner of Patents refusing a patent to Solomon C. Warner, for combining with the metallic calender rollers an elastic endless apron and a stretching frame, for manufacturing corrugated or shirred India rubber goods.

The only material point "involved in the reasons of appeal," and to which my revision must be limited is, whether Solomon C. Warner was the first inventor of that combination, (which is the same combination for which Charles Goodyear obtained a patent on the 9th of March, 1844, upon a specification dated July, 24, 1843; more than fifteen months before the application of Solomon C. Warner;) for if he was not the first inventor, it is immaterial to this cause who was.

Upon this point the Commissioner of Patents has decided that he was not the first inventor; and upon his appeal from that decision the question is now brought before me, and must be decided according to the evidence produced before the Commissioner, and now laid before me.

That a patentable improvement in the manufacture of corrugated or shirred India rubber goods by machinery has been invented, is admitted by both parties; and, in order to ascertain who was the inventor, it seems to be necessary, first, to ascertain in what this patentable improvement consists.

It does not consist in the whole machine nor in any particular part of it; for neither the whole nor any part of it is new. The invention consists only of a new combination of some known mechanical principles or powers. The calenders, the rollers, the endless apron and the stretching frame are all old instruments, and, as such, cannot be patented; but when a certain particular combination of them produces a new and useful *effect* in the manufacture, that combination becomes the lawful subject of a patent.

Warner's specification says, that what he claims as new is the combining with the metallic calender rollers an elastic endless apron and a stretching frame. Goodyear's specification is in the same words, omitting the word *metallic*.

The question then is, was Solomon C. Warner the first inventor of that combination?

A vast deal of testimony has been taken; much of it is immaterial. The counsel for the claimant objects to some of Mr. Goodyear's witnesses as incompetent, by reason of their interest. But there is an agreement, signed by the counsel of the parties, dated January 9, 1846, "that all testimony taken before ——— Gardiner, Esq., United States commissioner, and ——— Metcalf, Esq., United States commissioner, up to and during the 9th of January, 1846, shall be heard ard considered by the Commissioner of Patents, whether the same be filed before the twelfth day of January instant, or not, rights reserved as to all other testimony taken after this date." All the testimony to which the objection relates was taken before those commissioners, or one of them, and before or during the 9th of January, 1846. This agreement seems to me to be a waiver of the objection to the competency of the witnesses, whose testimony is thus agreed to be heard and considered. The objection, however, may go to their credit, and have its due weight.

The principal evidence in favor of the claim of Mr. Solomon C. Warner is the inference drawn from the fact that he made the machine which contains the combination for which he desires to obtain a patent.

This is *primâ facie* evidence that he was the first inventor of that combination. This inference, however, is rebutted by the facts that in making that machine he was working in his trade as a machinist, in the employment and for the benefit of Mr. Goodyear, for wages; that he did not claim to be the inventor of that combination for a long time after his supposed invention, but stood by and saw Mr. Goodyear apply for and obtain a patent for it without objection, and did not apply for a patent for it as his own invention until the 4th of November, 1844, more than 18 months after his supposed invention, and nearly six months after Goodyear had obtained his patent for the same invention, and not till Norton and Lawrence had agreed to secure him against all costs and expenses to be incurred in procuring the patent.

These facts seem to me to rebut the inference drawn from the fact that Mr. Warner was the fabricator of the machine which contains the combination.

The greater part of the testimony produced by him is to prove the fact that he built the machine.

The presumption, from the fact that Warner made the machine

for Goodyear, at his request, for his benefit, and at his expense, is that it was made according to his directions; and the burden of proof is then on Warner, to show that the machine was not made according to his directions.

By a careful examination of the testimony, I am satisfied that in the fall of 1842 Mr. Charles Goodyear made several experiments, combining the principle of the calenders, the stretching frame, and the elastic apron passing through the calenders, with the cloth intended to be corrugated; and ascertained that a machine combining those principles, if properly made, would effect the object he has in view, viz.: the shirring of India rubber goods by machinery.

This combination, the effect of which Mr. Goodyear had thus ascertained, was reduced to practice by the machine built by Solomon C. Warner, at the request or by the order, and at the expense of Mr. Goodyear, so that it was, in fact, Mr. Goodyear, and not Mr. Warner, who reduced the invention to practice.

Whether the apron should be an endless or a straight apron does not affect the principle; the object was to have an elastic matter pass through the calenders, with the cloth intended to be corrugated. The one may do the work better than the other, but either of them effects the object intended.

Mr. Goodyear's discovery or invention was in the year 1842. Mr. Warner claims only from the spring of 1843.

Without deciding, therefore, the question, whether or not Mr. Solomon C. Warner received his instructions from Mr. Goodyear or from Mr. Emory Rider, or from any one else, I am of opinion, from the evidence, that Mr. Solomon C. Warner was not the first inventor of the combination for which he seeks to obtain a patent.

W. CRANCH.

July 17*th*, 1846.

JOSEPH P. HAZARD and HENRY R. GREEN } In case of rejection of an application for an improvement in the manufacture of shoes and brogans.

I, William Cranch, Chief Justice of the District Court of the United States for the District of Columbia, hereby certify, that on the 15th day of May, in the year 1847, according to notice, I proceeded to hear the appeal of Joseph P. Hazard and Henry R. Green

from the decision of the Commissioner of Patents, rejecting their application for an improvement in the manufacture of shoes; and having heard and considered the same, and the appellant's reasons of appeal, and the grounds of the Commissioner's decision, filed in the office, —

I am of opinion, and do determine, that the appellants are not entitled to the patent for which they have applied, and that the decision of the Commissioner rejecting their application therefor be, and the same is hereby, confirmed.

Given under my hand this 15th of May, 1847.

W. CRANCH.

To the HON. EDMUND BURKE,
Commissioner of Patents.

WILLIAM CUNDELL, appellant,
vs.
ZIBA PARKHURST, appellee.

Upon appeal by William Cundell from the decision of the Commissioner of Patents, awarding priority of invention to Ziba Parkhurst, of the *zigzag* or pointed guard to be applied to burring machines;—

I, William Cranch, Chief Justice of the district court of the United States for the District of Columbia, certify to the Hon. Edmund Burke, Commissioner of Patents, that on the 24th of May, 1847, according to notice duly given, the parties aforesaid appeared before me, viz.: the said William Cundell, by Mr. Keller, his attorney, and Mr. Ziba Parkhurst, by George Gifford, Esq., his attorney; Mr. Fitzgerald of the Patent Office was also present; and the said appeal was heard upon the decision of the said Commissioner of Patents, and the reasons of appeal filed in the office, with the grounds of said decision fully set forth in writing touching all the points involved in the reasons of appeal, and the same being fully argued, heard, and considered, I do adjudge that the said decision of the said Commissioner of Patents be, and it is hereby affirmed, and I do determine that the said Ziba Parkhurst is entitled "to *receive a patent as prayed for.*"

I return herewith all the papers. May 24, 1847.

W. CRANCH.

May 28, 1847.

Opinion of the Judge.

WILLIAM CUNDELL,
vs.
ZIBA PARKHURST.

Appeal from the decision of the Commissioner of Patents refusing a patent to William Cundell, because it interferes with an application by Parkhurst, the prior inventor of the same improvement of a machine for cleaning sheep's wool from burrs, &c. The commissioner having decided that Parkhurst was the first inventor of the improvement.

The Commissioner's decision is as follows:

"The invention in dispute between the parties is the application of the zigzag or pointed guard to the burring machine. The testimony of James C. Johnson proves that the said Parkhurst showed the guard in question as early as the spring of 1845; and none of the witnesses testify to its invention by the said Cundell earlier than the summer of the same year. Priority of invention is therefore decided in favor of *Ziba Parkhurst*. This view of the case renders the decisions of the interlocutory questions which have been raised in taking the testimony wholly unnecessary. February 2, 1847."

From this decision Mr. Cundell has appealed and assigned his reasons of appeal as follows:

"Although the witness referred to does testify that Ziba Parkhurst described to him the improvement in question in the spring of 1845, and at a time anterior to the alleged invention of William Cundell, yet, it will appear from the testimony on both sides that this witness erred in his statement of the time at which this communication was made to him, for it is clearly proved, by the testimony, that this improvement was made in consequence of the imperfect working of the *original* machine, and to remedy a defect which was discovered after *this* machine was put in operation, and the whole of the testimony shows that *this* machine was not put in operation until the month of July, 1845, subsequent to the time at which the witness testifies the said improvement was described to him by Parkhurst; they therefore submit that the improvement *which was the result of, and suggested by the defective working of a machine*, could not have been described before the said machine was constructed and put in operation; and that, *therefore*, the Commissioner of Patents erred in giving

credence to the statement by a witness of a date, which *all* the circumstances of the case, established by the testimony adduced on both sides, clearly shows was the result of error."

By the act of March 3, 1839, section 11th, the Commissioner of Patents is to "lay before the judge all the original papers and evidence in the case, together with the grounds of his decision fully set forth in writing touching all the points involved by the reasons of appeal, to which the revision shall be confined."

The only point involved in the reasons of appeal is the date of the conversation between Ziba Parkhurst and Joseph C. Johnson, in which the former showed the latter a drawing similar to exhibit D, of a machine called a stripper or guard, to be applied to burring machines. Mr. Johnson thinks it was the latter part of the spring of 1845, but says he cannot name dates. He fixes the date, however, by recollection of another fact, to wit: that in May, 1845, Ziba Parkhurst went out to Erie county, Pennsylvania, and Ohio, and bought some fifty or sixty thousand pounds of wool, and drew upon Johnson's house for it, who sold it on commission for him, and that that is his reason for knowing the time; and that he saw the machine before Ziba left for Erie county, Pennsylvania.

This witness, who is a merchant, appears to have testified fairly and impartially. No attempt is made to discredit him, unless by showing that he has mistaken the date of the conversation. This is attempted to be done by proving facts supposed to be inconsistent with the testimony of this witness.

None of the other witnesses carry the invention farther back than a few weeks after Stephen R. Parkhurst first departed for England, which appears to have been about the first of August, 1845; but they speak of the time when the *invention* was *first applied to a machine in operation*, not to the time of the invention itself, which necessarily precedes it. There is, therefore, no irreconcilable discrepancy between Mr. Johnson and the witnesses as to the time.

But it is said by Mr. Cundell's counsel that the defects of the machine, at No. 60 Vesey street, led Ziba to suggest the improvement, and that the machine was not put into operation in Vesey street until the 18th of July, 1845. But I have not found any evidence that it was the defect in the working of that particular machine that suggested the improvement. Other burring machines had been before in use, to which the new stripper might be an improvement, and the defects of which might have suggested the improvement.

Other circumstances have been given in evidence tending to throw some doubts as to the time of the invention, but none which, in my opinion, outweigh the positive testimony of Mr. Johnson.

I am, therefore, of opinion that Ziba Parkhurst has established his priority of invention of the zigzag guard to the burring-machine, and is entitled to a patent therefor; and that the decision of the Commissioner of Patents be affirmed. W. CRANCH.

May 27, 1847.

DISTRICT OF COLUMBIA, *to wit*:

ALONZO D. PERRY, appellant,

vs.

SAMUEL C. CORNELL, appellee.

} Upon appeal from the Commissioner of Patents, awarding priority of invention to Samuel G. Cornell, of his invention of an improvement in the machine for the manufacture of lead pipes.

I, William Cranch, chief justice of the district court of the United States for the District of Columbia, certify to the Hon. Edmund Burke, Commissioner of Patents, that on the 21st day of June, 1847, according to notice duly given, the parties appeared before me, namely: the said Alonzo D. Perry, by Mr. Keller, his attorney, and the said Samuel G. Cornell, by Mr. Stoughton, his counsel; Mr. Fitzgerald, of the Patent Office, being also present; and the said appeal was heard before me at my chambers in the City Hall, in Washington, D. C., and argued by counsel on the 21st, 22d, 23d and 24th of June aforesaid, upon the decision of the said Commissioner of Patents, and the reasons of appeal filed in the office, with the grounds of the said decision fully set forth in writing, touching all the points involved in the reasons of appeal, and the evidence produced before the said Commissioner; and the same being fully heard, argued, and considered, I do, this 7th day of July, 1847, adjudge and determine that the said decision of the said Commissioner of Patents, awarding priority of invention to the said Samuel G. Cornell, be, and the same is hereby affirmed, and that he "is entitled to receive a patent, as prayed for." W. CRANCH.

I return all the papers.

W. C.

A. D. PERRY, appellant,
vs.
S. G. CORNELL, appellee.
} Appeal from Commissioner of Patents.

The first reason of appeal is, that the *evidence* does not show Cornell to be the first to conceive the idea of a machine such as he now claims.

The question, therefore, is, what is the evidence?

The counsel for Mr. Perry offered to the Commissioner of Patents the depositions of Robert J. Craig, and twenty other witnesses, taken without notice to this applicant, Samuel G. Cornell. These depositions, therefore, cannot be used against him, unless he has waived his right to notice, and agreed to admit them to be read in evidence before the Commissioner of Patents. It is suggested that the notice given by Mr. Cornell's counsel to the other parties litigant, to produce these depositions to a Commissioner for inspection and examination by his counsel, and the offer by Mr. Perry to have the witnesses again before the Commissioner, to be cross-examined by Mr. Cornell's counsel, and his refusal to cross-examine them when produced, was equivalent to a waiver of notice.

I am not, however, of that opinion. Mr. Cornell had a right to be present at the direct examination in chief. But it is said that the Commissioner of Patents has received these depositions in evidence; and, as he decided in favor of Cornell, he cannot appeal upon that ground. But the Commissioner, in his judgment, says it is unnecessary to decide the question raised in reference to the admissibility of the evidence, as its rejection would not vary the result. It is plain, therefore, that he did not decide that question. There is no evidence that Mr. Cornell, or his counsel, has ever agreed to admit these depositions as evidence against him. They must, therefore, be rejected.

Mr. Keller, the agent of the defeated applicant, objects to my hearing any argument by an officer or counsel of the Patent Office. Heretofore it has been usual for some officer of the Patent Office to attend the hearings before the judge, upon appeals from the judgment of the Commissioner, and no objection to that course has been taken, until this time. The officer who attends is not considered as counsel for the Commissioner, or for the office; and I should think he could not with propriety be considered as an advocate of either of the parties litigant. I have hitherto considered him as attending for

the purpose of explaining the decision of the Commissioner, and not as arguing the cause of either of the litigants. He can only appear as an officer of the department; as such I shall always be willing to avail myself of his assistance in the investigation of the truth.

W. CRANCH.

Opinion given Tuesday morning, June 23, 1847.

A. D. PERRY, appellant, *vs.* S. G. CORNELL, appellee. } Appeal from the decision of the Commissioner of Patents, awarding priority of invention to Samuel G. Cornell of an improvement in the machine for making lead pipe.

There were four conflicting applications for a patent for the improvement —

1st. By John Robertson, on the 9th of September, 1846.
2d. By Alonzo D. Perry, on the 6th of October, 1846.
3d. By Stephen Parks, Jr., on the 12th of November, 1846, and
4th. By Samuel G. Cornell, on the 21st of December, 1846.

Before the application of Samuel G. Cornell, and while the litigation was going on between the other three applicants, the depositions of twenty-one witnesses had been taken on the part of those applicants, respectively, and, of course, without notice to Mr. Cornell, who had not then made his application. These depositions were returned to the Commissioner of Patents, and objected to by Mr. Cornell's counsel for want of notice.

The Commissioner, without deciding upon the question of the admissibility of the evidence as to Mr. Cornell, awarded to him the priority of invention, saying, "the decision of the question raised in reference to the admissibility of testimony is unnecessary to decide; its rejection would not vary the result; the testimony is therefore received, and priority of invention awarded to Samuel G. Cornell." (March 24, 1847.)

From this decision Mr. Perry has appealed, and his reasons of appeal are in effect —

1st. That the evidence does not show that Mr. Cornell was the first to conceive the idea of a machine such as he now claims, but that the plan proved to have been so conceived is essentially different and mechanically inferior to the one claimed and now awarded to him by the Commissioner.

2d. That the evidence on which the decision in favor of Mr. Cornell is based is contradictory and insufficient to establish his claim even to the conception of the idea of the principle or mode of operation of the machine now sought to be patented, but, on the contrary, shows that the plan said to have been conceived was entirely different; and

3d. That if he did conceive the idea of the principle or mode of operation of a machine substantially similar to the one now claimed, and did describe to the witness such a machine prior to the date of the invention claimed by the applicant, Perry, yet it was merely an intellectual invention, based in theory, and not an invention in the meaning of the law.

The Commissioner has laid before me "the original papers and evidence in the case, together with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal," to which my revision must be confined as provided in the 11th section of the act of March 3d, 1839, c. 88, (pamphlet edition, pp. 75 and 76.)

The grounds of the decision of the Commissioner, as set forth in writing, are in substance —

"That it is proved by the testimony of Wm. Frost, confirmed by that of Benjamin Peck, that the said Cornell invented *the machine in dispute* as early as the summer of 1843; and there is no testimony that tends to show that either of the other parties invented it until a considerable time afterwards."

That "it appears by the testimony of Frost that Cornell described the machine to him fully, so that he perfectly understood it; that he repeatedly made draughts representing it in so clear a manner that the said Frost was able to make draughts and estimates of its cost, and absolutely did make both with the assistance of Cornell."

That "Cornell made the invention as clearly understood as if the machine had been built and in operation." "It appears, therefore, that Cornell had done all that an inventor, as such, could do, and nothing remained to complete the machine, but the labor of the mechanic, which cannot be confounded with invention." "The daily number of inventions daily patented have never been reduced to practice."

In the grounds of his decision, the Commissioner controverts the *dictum* found in some of the books, that "he who first reduces an

invention to practice, is the first inventor:" a *dictum* which, he says, "although often quoted and reiterated, was not applicable to, nor borne out by, the case in which it was first pronounced, nor by any of the cases in which it has subsequently been repeated; and which, in the broad terms in which it is announced, is not, and never has been, the law. If by reduction to practice is meant *rendering a principle practicable or useful in a new way*, and clearly pointed out the manner in which it may be thus made useful, so that any competent mechanic can avail himself of it, then, and in that sense, an invention must be reduced to practice;" but "neither the statutes, nor the decisions of the courts, require that a machine should be *built and used as a part of the invention*, and before the party can be considered an inventor; but that the sense, above alluded to, is the sense in which the courts have used the phrase *reduction to practice;*" and the only sense which will reconcile the "decisions, and make them conform to the statutes regulating patent rights."

The other two applicants, Mr. Robertson and Mr. Parks, have not appealed; so that the contest is now between Mr. Perry and Mr. Cornell only.

It is admitted that a great and valuable improvement has been made in the old machine for making lead pipes; and the principal, if not the only point involved in the reasons of appeal is the question — "Which, or whether either of these two applicants is entitled to receive the patent prayed for;" and this is to be decided by the *evidence* produced before the Commissioner. The 21 depositions taken in the conflict between Robertson, Perry, and Parks, being taken without notice to Cornell, are not evidence against him, and, therefore, cannot be considered by the judge upon the appeal. The only evidence which he can consider is that which is contained in the depositions of Wm. Frost and Benjamin Peck, and in the cross-examination of Mr. Cornell himself by the counsel of Mr. Perry.

The question then is — whether the machine described by Mr. Cornell to those two witnesses is substantially the same as that for which he asks a patent.

The improvement consists in the great diminution of the friction of the machine, by which the same effect is produced by a power much less than that which was necessary to work the old machine.

As the question is merely of priority of invention, it is not neces-

sary to describe the particular alterations of the old machine which constitute the improvement.

It is, however, necessary to examine the testimony, to see whether the improvement which Mr. Cornell described to the witnesses is substantially the same as that for which he now claims a patent.

It appears by the deposition of Mr. William Frost, the principal witness, and who seems to have testified fairly and intelligently, that Mr. Cornell, in June or July, 1843, described to the witness a plan for a machine for making lead pipe, different from any machine for that purpose then in use; and that he intended to use a hollow ram, with an aperture in the bottom coming out at the side of the ram; that he intended to place a die on the top of the ram, then to have a mandril to pass through the top of the cylinder long enough to pass through the interior of the die, leaving a space between the mandril and the die for the lead to pass through, when the ram was forced upward against the lead, making the pipe from that portion of the lead which was first acted upon by the top of the ram being pressed against it; his object being, as he stated it, to avoid the immense friction that was produced by driving so large a mass of lead before the ram, out through the aperture, as used in many other machines then in use. That he (Mr. Cornell) exhibited to the witness a sketch or drawing of his plan; and the witness then prepared and produced a drawing of Cornell's plan, as he then drew and described it, which is annexed to his deposition, and marked A.

That, about a fortnight afterward, the witness had a further conversation with Mr. Cornell in relation to his said plan for a pipe machine in Mr. Cornell's office, in New York; that he then stated to the witness and described the manner in which he intended to construct a pipe machine for the purpose of passing the lead pipe through the interior of the ram, and for using a movable mandril in connection with the hollow ram, and for forming the pipe at the point on which the ram pressed against the lead; that Mr. Cornell made a sketch of such machine, a copy of which this witness has made, thinking it might be called for, and to explain the arrangement which he then described. Mr. Cornell said he intended to make such a machine. The counsel for Mr. Perry objected to the introduction of the copy of Mr. Cornell's sketch, unless the loss of the original should first be proved. After the proof of the loss of

the original, the witness produced and filed his copy, which is annexed to the deposition and marked B.

It further appears, by the testimony of the witness, William Frost, that the sketch or drawing B differs from the sketch or drawing A, in having two cross-heads and two rods to connect them together; also an upper movable mandril, which was connected to the upper cross-head and kept in its proper position by means of a stand or frame which was secured to the lead cylinder, the lower cross being secured to the ram rising from the hydraulic cylinder. The upper mandril or ram, he stated, might be hollow or solid, for the purpose of holding either the short mandril or die; that these drawings do not exhibit the nuts, bolts, or screws, or the manner in which the different parts are guided or secured to each other, but merely the arrangement of the raiser dies and mandrils to each other, and as he designed to place them for the purpose of manufacturing lead or other pipes; that the leading essential feature of these two planes, which distinguishes them from machines previously known for the purpose of making lead pipe, is the hollow ram, and the die placed on the top of it, and the forming of the pipe on the head of that ram from the point where it presses against the lead, and the passing of the pipe, when so formed, through the interior of the ram; that the second plan drawn and described to this witness contained this essential feature or difference, with the addition of the parts which are before described; that, from the drawings and descriptions so made by Mr. Cornell to this witness, he could have made and constructed machines for making pipe upon those plans.

That the drawing, marked exhibit B, shows the relations of the rams to each other, of the die, of the short mandril, of the cross-heads, and the rods which connect them together, as also the lead cylinder, the cast iron stand or frame, the hydraulic cylinder, and a portion of the ram rising therefrom; as also the columns for connecting the hydraulic and lead cylinder together. It also shows the upper hollow ram, as also the lower hollow ram, with the apertures through the same. It does not describe the manner in which the different parts are secured to each other, but simply the arrangement described by Mr. Cornell in New York.

This witness says he is not aware that Mr. Cornell ever built a machine with the improvements which he described to the witness.

He further testified that Mr. Cornell, at different times, showed

him at least half a dozen drawings like exhibit B on separate and distinct pieces of paper, also two in Connecticut and two in Brooklyn, also two like exhibit A, one of them on board of the steamboat "Croton," in June or July, 1843, and the other at his factory, in Glenville, Connecticut.

That, in the fall of 1844, he made, at the request of Mr. Cornell, an estimate of the cost of such a machine as that described in the exhibit B.

The witness, Benjamin Peck, testified that, in June, 1843, before Mr. Cornell had applied for a patent for his invention of an improvement in the machine for the manufacture of lead pipe, he communicated to this witness his plan for the construction thereof; that he stated that the die was to be attached to the end of the ram. The ram to be hollow, the pipe to form at the end of the ram, and pass down through the hollow ram; that the object was to prevent friction. The core was to pass through the cylinder, the end of it to be inserted in the die, the die and mandril to move together; that the mandril forms the inside of the pipe. It is sometimes called the core. The pipe is formed over the mandril or core. The hollow ram and the movable mandril were to move together by force of an hydraulic press; that Mr. Frost was present at this communication.

This witness states that the machine for which Mr. Cornell seeks a patent, contains, among other things, the lead cylinder, the ram, the die, the core, rod or mandril.

That the construction of this machine differs from that of the old machine, which was worked by Parks; in this the die is placed at the head of the ram, in the old one at the top of the cylinder. In this the pipe forms at the head of the ram, in the old one at the top of the cylinder. That the advantage of this over the old one is, that in the old one the whole body of lead from the bottom to the top of the cylinder was required to move in a body, in order to form the pipe at the top of the cylinder; whereas in this improvement the main body of the lead is not required to move, because the pipe forms at the head of the ram immediately after the pressure is put on, and passes out through the ram.

That about two months ago, (November, 1846,) Mr. Cornell showed this witness a pencil sketch of his improvement, saying that that was his plan for the machine for which he was about to get a patent, and to have a model made of it. That sketch did not *show*

the *hollow* ram. That when Mr. Cornell showed to this witness that sketch, he said that was a sketch of his invention which he had before disclosed to this witness, and that there was a die at the head of the ram, and that the ram was hollow; that on the sketch he saw he could not say whether the ram was hollow or not. He thinks there was no hydraulic sketch on that sketch. There was a lead cylinder and a mandril core or ram. The end of the core or mandril extended out of the top of the cylinder, and down to the head of the ram, or near to it. This witness was sure there was a representation of a ram; one end of the ram was placed near the cylinder, the other below. He thinks that no part of the ram, as represented in the sketch, entered the lead cylinder. That the ram of the lead cylinder, as represented in the sketch, was a round piece of iron. This witness only saw the sketch for a few minutes, and handed it back to Mr. Cornell. Being asked, in cross-examination, to describe the frame work of the machine as it appeared on the said sketch, he says there was a mark across the top which he supposed represented a piece, and one straight line down each side. The core was in the centre of the cylinder; one end projected at the top, and came down near the bottom of the cylinder. There was a piece across the top. He does not recollect seeing the die. He does not know by whom the sketch was made. This, he says, was a rough, and to all appearances an imperfect sketch. Mr. Cornell, the appellee, having been affirmed and examined as to the loss of the two original drawings or sketches, of which the witness, Mr. Frost, testified that the exhibits A and B are copies made by him, was cross-examined by the counsel of Mr. Perry, at large, as if he, Mr. Cornell, were a competent witness in chief — thereby making the answer of Mr. Cornell evidence for himself.

Upon that cross-examination he stated that he has a distinct recollection of making a sketch, and has no doubt it was at the time referred to by Mr. Frost. Thinks it was made on foolscap paper, with a lead pencil, but it might have been with ink. It was made in the office at his works, (in Connecticut;) presumes it was at the time Mr. Frost speaks of. They have had many conversations on the subject. He showed the drawings to Mr. Peck, and he thinks to Mr. Parks, who was at work for him. He affirms positively that he showed them to Mr. Peck and Mr. Frost. He does not wish to identify any particular drawings. He made a number at different times, and had frequent conversations with Mr. Peck and Mr. Frost on the

subject. He is not certain whether he mentioned it first to Mr. Frost or Mr. Peck. The first to Mr. Peck was, no doubt, in his works in Connecticut, in June, 1843. He cannot recollect which the first time he mentioned it to Mr. Frost, but it was in either June or July, 1843. He thinks it was early in June. He has none of his drawings at present. The first drawing was showing the appearance of a lead cylinder; the ram at the mouth of the cylinder, which ram should be hollow; a die to be placed in the head of the ram, and the pipe should form at the head of the ram as the ram rose, by any power that might be applied to it, and pass out through the bottom of the ram. The mandril or core, to form the calibre of the pipe, should come from the head of the cylinder.

From comparing this evidence with Mr. Cornell's specification, it will be seen that the invention therein described is substantially, if not exactly, that for which he now claims a patent. That it is a great improvement is admitted, and the only question is, who is entitled to the priority of invention? There being no evidence that any other person invented it, Mr. Cornell must be adjudged to be the first inventor.

But it is said that Mr. Cornell is not entitled to a patent, because he has never reduced the invention to practice. But reducing to practice, differs from bringing into use. There is no law requiring the applicant to reduce his invention to actual use before he can obtain a patent. On the contrary, the use of the invention before obtaining the patent is one of the reasons for refusing it. An inventor has reduced his invention to practice when he has so described it upon paper, with such drawings or model as to enable any person, *skilled in the art*, to make and use the same. He must show that it is practicable, and the manner in which it may be used. But it is not necessary that he should do this until he has perfected his invention and is ready to apply for a patent. He may have conceived the idea years ago, but is not obliged to furnish drawings or model until he makes his application. In the present case, the specification and drawings and model have been filed, showing the invention to be practicable, and the manner in which it can be used.

It is suggested that Mr. Cornell has not used "reasonable diligence in adjusting and perfecting" his invention; having done nothing from the spring of 1843 to the winter of 1846, and therefore, under the equity of the fifteenth section of the patent law of 1836, has lost the benefit of his priority of invention. That clause of the section is

only applicable to the case of a patent surreptitiously or unjustly obtained while the first inventor was using reasonable diligence in adapting and perfecting his invention; not to the case of conflicting applicants before any patent is granted. It is one of the pleas which the defendant, who is sued for a supposed violation of the surreptitious patent, may plead; and if pleaded, it may be necessary for the defendant to show, *in order to vacate the patent*, that he was using reasonable diligence, &c., when the patent was obtained. But before a patent is granted to any one for the invention, there is no law that requires the first inventor to disclose his invention within any limited time before application for a patent; and there is no limitation unless the lapse of time be sufficient to show an abandonment of the invention, which is a question for the jury and not for the Commissioner. Nor does the priority of application for a patent decide the priority of invention.

It should be borne in mind, that the cases cited from the books are all cases at law or in equity, in actions for violations of patents already granted. The proceedings before the Commissioner of Patents are initiatory. The question is, "whether the patent shall be granted," not "whether it shall be vacated;" and a patent may be granted or refused upon less evidence than would be required to sustain or amend it.

Upon all the points made in this case, I refer to the opinion in the case of the appeal of *Hildreth* v. *Heath*, filed in the Patent Office, on the 15th of October, 1841.

Upon consideration of the whole case, I am of opinion that Samuel G. Cornell is the first inventor of the improvement in the machine for making lead-pipe, as claimed in his specification, and that the decision of the Commissioner of Patents, awarding the priority of invention to the said Samuel G. Cornell, be, and the same is hereby, affirmed; and that he is "entitled to receive a patent as prayed for."

W. CRANCH.

July 7, 1847.

DISTRICT OF COLUMBIA, *to wit:*

WILLIAM ATKINSON, appellant,
vs.
WILLIAM BOARDMAN, Jr., appellee.

Your appeal from the decision of the Commissioner of Patents, "that William Boardman, Jr., is the first inventor of the improvements to the portable steam-pump, which are the subject-matters in controversy" between the said parties, which decision bears date on the 17th of May, 1847:

I, William Cranch, Chief Justice of the District Court of the United States for the District of Columbia, certify to the honorable the Commissioner of Patents, that, on the second Monday in October, 1847, according to notice duly given, the parties aforesaid appeared before me, namely: the said William Atkinson by his counsel, Charles M. Keller, and the said William Boardman, Jr., by his counsel, *Z.* C. Robbins — when the said counsel agreed to submit their respective arguments in writing, which was done on Thursday, the 14th of the said month, to which day the hearing of the said appeal was by consent adjourned; and the said appeal being then fully heard and considered by me upon all points involved by reason of appeal, and the grounds of your decision filed in the office, I do hereby affirm the same, and adjudge that the said William Boardman, Jr., is the inventor of the improvements to the portable steam-pump, which are the subject-matters in this controversy.

W. CRANCH.

October 21, 1847.

This decision is sustained by the following opinions:

WILLIAM ATKINSON, appellant,
vs.
WILLIAM BOARDMAN, Jr., appellee.

This is an appeal from the decision of the Commissioner of Patents, in a case of conflicting applications for certain improvements in the construction of steam-pumps.

It appears by the files in the Patent Office, that, on the 4th of December, 1843, William Boardman, Jr., filed his application for his invention "of a new and improved portable steam-pumping engine,

for relieving stranded vessels and for other purposes," which application was rejected by the then Commissioner of Patents, on the 20th of February, 1844. It does not appear upon what grounds that application was rejected; but it is suggested that the matter as then presented was not patentable, but that certain improvements have been since invented and made by which the matter has become patentable, and the Commissioner has decided that the applicant, William Boardman, Jr., is entitled to a patent. It is unnecessary to ascertain what these improvements were, as this is a case of conflicting applications for a patent for the same thing. The question is not, now, who invented the matter upon which the first application of Mr. Boardman was founded, but who is the inventor of the improvements which have made the matter patentable. That such improvements have been made is admitted by both parties, and by the Commissioner.

I do not find any evidence that Mr. Atkinson, after the rejection of Mr. Boardman's first application, on the 20th of February, 1844, invented any patentable improvement upon the pump. It appears by all the evidence that Mr. Boardman *constructed* the pump and all the improvements. In the absence of all evidence to the contrary, the presumption, therefore, is that he was also the *inventor*, and the burden of proof is thrown upon Mr. Atkinson to show, not merely that he first suggested to Mr. Boardman the abstract idea of a steam-pump, (for steam-pumps had been in common use for many years,) but that he invented the improvements which entitle it to a patent. To rebut this inference Mr. Atkinson produces the deposition of *Josiah L. Hale*, who says: "Not long after the loss of the ship Sheffield, in November or December, 1843, I met Mr. Atkinson and Mr. Boardman in the Merchants' Exchange, and knowing that some alienation of feeling existed between them, and being anxious that they should be friends, I said to Mr. Boardman, 'why don't you and Mr. Atkinson settle your difficulties?' or words equivalent. He, Boardman, made a reply, having reference to a little paragraph, which had, about that time, appeared in one of the papers, respecting the pump in question," (meaning, no doubt, the paragraph which appeared in the *Journal of Commerce* of the 25th of November, 1843, which gave to Mr. Atkinson the whole credit of the invention of the pump.) "He, Boardman, spoke with some warmth, but respectfully. The deponent replied, '*I had always supposed Mr. Atkinson was the inventor.*' He, Boardman said, '*he was*— *I again*

say, he was' — he, Boardman, used these words, or words equally strong. I, deponent, replied, 'so I always supposed.' After these strong expressions, Mr. Boardman said 'that it was the *combination* which made the steam-pump.' Always supposing that Mr. Atkinson was the inventor, I feel certain I could never have conveyed any other idea to any person that he was not the inventor."

Taking the whole testimony of Mr. Josiah L. Hale, altogether, it seems strange that Mr. Boardman, while expressing indignation at the paragraph which gave to Mr. Atkinson the whole credit for the invention of the pump, should have admitted that he was the *inventor*, in the technical sense of the word. He might have admitted "that Mr. Atkinson suggested the idea of *having* a steam-pump," as testified by Mr. Flanders; and yet he (Boardman) might be the inventor of the peculiar combination of mechanical principles which entitled it to a patent. Mr. Hale says that Boardman told him, "that it was the *combination* which made the steam-pump." There is no evidence that that *combination* was suggested to him by Mr. Atkinson.

I do not perceive in the testimony, any further evidence in support of Mr. Atkinson's claim to be the inventor of any of the patentable improvements in the portable steam-pump.

I have not considered the declarations of the parties in their own favor, in the absence of each other, as competent evidence in this cause for any purpose but to ascertain when and what they have respectively claimed to have invented.

There is no evidence that Mr. Boardman was in the employment and pay of Mr. Atkinson at the time of the supposed invention, or at the time of the construction of the improvements which render it a patentable invention, or at any previous time. On the contrary, it appears in the testimony of Mr. Currier, that before his first application for a patent, in December, 1843, Mr. Boardman built four of these pumps for the board of underwriters, who paid him for the construction thereof; and that this was done without the interference or agency, but with the knowledge of Mr. Boardman.

There does not appear to be any evidence that Mr. Atkinson, either before or after the rejection of Mr. Boardman's application for a patent for the pump, gave Mr. Boardman any instructions in relation to the particular combination of mechanical principles, which is understood to be the ground of his present application for

a patent; nor any model or drawings by which to construct the pump, nor does there appear to be any evidence that he paid Boardman or any other person for constructing it; or that the underwriters had any authority from Mr. Atkinson to use these pumps, which had been built for them by Mr. Boardman.

The deposition of Mr. *Josiah L. Hale*, was taken in New York ten days after Mr. Boardman's, senior, deposition had been taken, in Nashville, New Hampshire, and may have been taken with a view to rebut it. *Mr. Boardman, senior*, testified that between the spring of 1841, and the fall of 1842, Mr. Atkinson told him that William (his son) had invented a steam-pump at his, Atkinson's request, and that he had requested William to turn his attention to getting up a steam-pump, a portable pump, to be used about wrecked vessels. That Atkinson asked him if he had seen the model of the pump invented by William. He, this witness, replied, that it was shown to him by Currier. That in none of the conversations which he had with Mr. Atkinson did he ever pretend or intimate that he was the inventor of the pump, or of any part of it, but, on the contrary, had always stated, that William, his son, was the inventor. That in September, 1842, Mr. Hale, speaking of William Boardman, junior, said, he had recently invented a steam-pump, which they thought highly of, and he should use his influence to have the insurance companies adopt it, and to have one built, and that he intended William should make money out of it.

Mrs. Boardman, mother of the appellee, says, that in the summer of 1842, Mr. Atkinson, speaking of her son, William, told her that he had been inventing a new pump — a steam-pump, to raise ships from the ocean, that he thought William would do something great with it, that he would assist him. That in the next season, Mr. Atkinson was again at their house in Nashville. He said William was getting along finely with his pump, and expressed his opinion that it would be very valuable to him. That in neither of these conversations did Mr. Atkinson intimate that he had invented any part of the said pump. That he expressed himself as grateful for favors he had received from her husband, and was glad to have some opportunity to make a return by assisting her son.

Mr. Jeremiah J. Dickinson says that some time between June and September, 1842, he was present at the exhibition of a steam-pump in Pearl street, at the request of Mr. Atkinson. That two or three

of the board of underwriters were there, and he thinks Mr. Boardman was there also; he understood from Mr. Atkinson that Mr. Boardman was the inventor of the pump; that Mr. Atkinson was to find the funds, and that they were to be partners in the concern; and that he always thought they were partners until one or two years ago, when he learned there had been some misunderstanding between them.

Horace Prior testifies that he received from Mr. Boardman compensation for the use of the room in which the pump was exhibited.

Mr. Orlando Bennett proves the publication of the offensive paragraph, which seems to have caused the misunderstanding between Boardman and Atkinson, by attributing the whole invention to Mr. Atkinson. This paragraph, a copy of which is annexed to Mr. Bennet's deposition, appeared in the Journal of Commerce of the 25th of November, 1843. This seems to have excited Mr. Boardman, and on the 4th of December following he filed his petition for a patent.

William Fletcher testifies that William Boardman, Jun., employed him to make the patterns for the pump, and paid him for making them. Mr. Boardman showed him a sketch which gave him the idea so that he could commence. He never had any communication with Mr. Atkinson, and did not know him till the day of taking his deposition. This witness made a casting of the pump pattern. Mr. Boardman made an alteration in the angle of the discharge nozzle. About the 1st of June, 1842, he took to Mr. Boardman a boiler for the purpose of trying the model, which was then complete. The boiler was of iron. The pumps were cast in Browning's foundery.

Cyrus Currier, of the firm of Davis, Currier & Co., machinists at Newark, New Jersey, testifies that they made four of these steam-pumps for Mr. Boardman, and were paid for them by the New York underwriters; Mr. Boardman having attested to the accuracy of the accounts. That he directed the building of them, and drafted them. The order for the first pump was given about the middle of March, and completed the middle of May, 1843.

Mr. Atkinson was never in the shop during the building of these pumps, to the knowledge of this witness, and gave no instructions about the building of them. He, Mr. Atkinson, has been in the shop since they removed. He came and said he wanted an engine

built with a pump attached to it. He gave no drawings, but asked this witness's opinion as to the size, &c.; thinks he asked if Mr. Boardman's patterns were there; he was answered "no," they were in New York. He then asked the witness if he could build him a pump, the same as they had built for Boardman; thinks it was in the fall of 1841, that Boardman first told him he contemplated building a pump for wrecking purposes. Thinks it was in the middle of the fall. He first saw the model of the steam-pump completed in the spring or summer of 1842. He saw Mr. Atkinson at the place where he saw the model. Mr. Atkinson did not, at that time, claim to be the inventor of the pump, or say any thing to lead this witness to think that he was the inventor, nor did he say or do any thing which gave this witness to understand that he did not recognize Mr. Boardman, at that time, as the inventor. Mr. Atkinson said nothing about it. Mr. Boardman showed him the whole and explained it to him.

Mr. Julius Von Schmidt, a machinist in Washington, D. C., testified that he was applied to, to make a model for Mr. Atkinson "a year ago last winter." (His deposition was taken in 1847.) Mr. Atkinson showed him a model and drawing in Doctor Jones's, and wished him to make him such a model, which he did with some small variation; saw the same model in the Patent Office about three months ago. The name of William Boardman, junior, was upon it. He made a sketch of it at Dr. Jones's office. He has seen at the Patent Office, the model he made for Mr. Atkinson. Mr. Atkinson did not give him any idea of the principle or construction of the pump before he took him to Dr. Jones's office. He called the model at Dr. Jones's office *his* model. He did not examine the drawing particularly; he only took a glance at it. Dr. Jones held it in his hands, and took it away immediately and told him he could sketch better from the model. Upon a careful consideration and comparison of the evidence on both sides, I am of opinion that the preponderance is greatly in favor of William Boardman, jun., as the inventor of the improvements in the steam-pump, for which he has now applied for a patent, and I do therefore affirm the decision of the honorable the Commissioner of Patents in this cause.

W. CRANCH.

October 21, 1847.

DISTRICT OF COLUMBIA, *to wit:*

Edwin Janney, appellant from the refusal of the Commissioner of Patents to rehear his application for a patent after it had been twice rejected by the late Commissioner, Mr. Ellsworth.

I, William Cranch, Chief Justice of the District Court of the United States for the District of Columbia, certify to the Hon. Edmund Burke, Commissioner of Patents, that on the 13th of December, 1847, according to notice given, the said Edwin Janney appeared before me, and was fully heard by his counsel, Mr. J. J. Greenough, in support of his appeal; Mr. Fitzgerald, an examining clerk in the Patent Office being also present and heard in explanation of the grounds of the Commissioner's decision.

Whereupon, inasmuch as the decision of the Commissioner, from which the appeal is taken, neither affirms or denies the right of the applicant to the patent (which he claims) upon the merits of his supposed invention, it is not such a decision as is the subject of appeal under the act of July 4, 1836, "to promote the progress of useful arts," &c., or the act of March 3, 1839, in addition to that act, and that therefore I have not jurisdiction of this appeal, which is therefore hereby dismissed.

W. CRANCH.

December 14, 1847.

(The above decision is sustained by the following reasons:)

December 13, 1847. — EDWIN JANNEY, Appeal.

This is an appeal from the decision of the Commissioner of Patents in the following words, contained in a letter from him to Mr. Janney, dated

PATENT OFFICE, *Oct. 28th*, 1847.

"SIR, — It appears by the records of this office that your application for letters-patent for alleged improvement in machinery for sawing staves was examined and rejected, for reasons assigned on the 3d of August, 1843. That on the 7th of Semptember following, the case was reconsidered, and the decision was again revised and affirmed. All these actions took place under the administration of the late Commissioner Ellsworth.

"Under these circumstances, the decision heretofore made cannot be disturbed, and your application must stand rejected.

"Respectfully yours,

"EDMUND BURKE.

"EDWARD JANNEY, Esq.

"*Care of J. J. Greenough, Washington, D. C.*

The last application for the patent was made on the 27th of October, 1847, some small amendment having been made in the specification, not affecting the merits of the claim, so that it was, in effect, an application to the present Commissioner to revise and revoke the two decisions made by Mr. Ellsworth, the former Commissioner. His refusal so to revise and revoke these decisions is not a ground of appeal under the acts of 1836 and 1839. The act of 1839 gives the right of appeal to the Judge only in cases where an appeal was, by the previous act, allowed from the decision of the Commissioner to a board of examiners, and then only when a patent was refused. In the present case he has not refused a patent. He decides only that he will not examine the merits of the claim, which has been twice rejected, after a full examination of his predecessor in office. This refusal was not a ground for appeal to examiners under the 7th section of the act of 1836, and therefore is not a ground of appeal to the judge.

Having no jurisdiction of such an appeal, it is not for me to say whether the refusal, under the circumstances of the case, was right or wrong. There is no limitation of time as to the appeal; and I do not perceive any reason why Mr. Janney may not now appeal from the decision of Mr. Ellsworth, and have the merits of his invention decided. I understand the merits of both applications are alike. Having no jurisdiction of this appeal, I suppose it must be considered as dismissed.

W. CRANCH.

December 13, 1847.

ALEXANDER BAIN, appellant,

vs.

SAM'L. F. B. MORSE, appellee.

Upon appeal by Alexander Bain, from the decision of the Hon. Commissioner of Patents, rejecting his application for a patent for certain improvements in communicating intelligence by electro-chemical telegraphs.

I, William Cranch, Chief Justice of the District Court of the United States for the District of Columbia, certify to the Honorable the Commissioner of Patents, that on the first Monday of February, 1849, according to notice duly given, the parties aforesaid appeared before me; to wit., the said Alexander Bain by the Hon. R. M. Gillet, his counsel; and the said Samuel F. B. Morse, by Amos Kendall and Alexander H. Lawrence, Esquires, his counsel, and the said appeal was heard upon the decision of the said Commissioner of Patents, and the reasons of appeal filed in the office, with the grounds of the said decision, fully set forth in writing, touching all the points involved by the reasons of appeal; and the same, being fully argued, heard and considered, I do decide and adjudge, that the decision of the said Commissioner of Patents, "that the said Samuel F. B. Morse is the first and original inventor of the alleged improvement in Telegraphs, and as such, is entitled to receive a patent therefor," be, and the same is hereby reversed and annulled — inasmuch as the question of priority of invention does not necessarily arise in the case; as the claims of the two parties do not, in my opinion, interfere in regard to any matter (described in their respective specifications) which is now patentable. And I do further decide and adjudge that the said Samuel F. B. Morse is entitled, under the seventh section of the Act of 1836, to a patent for the combination which he has invented, — claimed and described in his specification, drawings, and model; and that the said Alexander Bain is entitled, under the same section, to a patent for the combination which he has invented, claimed, and described in his specifications, drawings, and model; provided the said Morse and Bain shall have, respectively, complied with all the requisites of the law to entitle them to their respective patents.

I deem it unnecessary therefore, to decide any other points involved by the reasons of appeal.

I herewith return all the papers, and add the reasons of my decision, which may be filed in the case.

W. CRANCH.

Washington, D. C., March 12, 1849.

The Commissioner, upon hearing, decided that Mr. Bain's claim interfered with Mr. Morse's; and that Mr. Morse was the first inventor, and rejected the claim of Mr. Bain. From this decision Mr Bain has appealed.

It is contended by the counsel of Mr. Morse, that the judge upon appeal has no jurisdiction of the question of interference. That an appeal is given only upon the question of *priority of invention*; and that upon the question of interference, the decision of the Commissioner is conclusive.

Whether it be thus conclusive, then, is the first question to be decided.

By the act of 1836, ch. 357, § 7, it is enacted, that "if the specification and claim shall not have been so modified as *in the opinion of the Commissioner*, shall entitle the applicant to a patent, he may, on an appeal, and upon request in writing, have the decision of a board of examiners, to be composed of three, &c.; and on examination and consideration of the matter by such board, it shall be in their power, or of a majority of them, to reverse the decision of the Commissioner, either in whole or in part; and their opinion being certified to the Commissioner, he shall be governed thereby in the further proceedings to be had on such application."

This section is applicable to cases where there is no conflicting applicant, and shows that the legislature, by saying, "*if in the opinion of the Commissioner*," &c., did not intend to make that opinion conclusive. On the contrary, it provides "that the board shall be furnished with a certificate in writing, of the opinion and decision of the Commissioner, stating the particular grounds of his objection, and the part or parts of the invention which he considers as not entitled to be patented; and that the said board shall give reasonable notice to the applicant, as well as to the Commissioner, of the time and place of their meeting," &c. All these provisions were evidently intended to enable the board of examiners to revise the opinion and decision of the Commissioner, and show that his opinion was not to be conclusive.

By the 8th section of the same act, (1836,) it is enacted, "That

whenever an application shall be made for a patent which, *in the opinion of the Commissioner*, would interfere with any other patent for which an application may be pending, or with any unexpired patent which shall have been granted, it shall be the duty of the Commissioner to give notice *thereof* to such applicants, or patentees, as the case may be; and if either shall be dissatisfied with the decision of the Commissioner on the question of *priority* of right or invention on a hearing thereof, he may appeal from such decision, on the like terms and conditions as are provided in the preceding section of this act; and the like proceedings shall be had, to determine *which*, or whether either of the applicants is entitled to receive a patent as prayed for."

The question of priority of right or invention necessarily implies *interference*. The Commissioner, before he could decide the question of priority, must have decided that of interference; for without interference there can be no question of priority. Before I can have jurisdiction of the question of priority, I must be satisfied that there is an interference; and I must decide the question of jurisdiction as well as any other question which arises in the cause.

The opinion of the Commissioner, [mentioned in the 8th section, that interference exists,] only justifies him in *giving notice thereof* to the other applicant, and appointing a day to hear the parties upon that question. He decides it only *pro hac vice;* and for that purpose only. Upon that hearing he is to decide; and from that decision, if either shall be dissatisfied with it, on the question of priority, including that of interference, he may appeal; and upon such appeal as I understand the law, the judge, in case of real interference, may "determine which, or whether either of the applicants is entitled to receive a patent as prayed for." The scope thus given to the judge, is broad enough to include the question of interference, as well as that of priority, if it should arise.

By the Act of 1839, ch. 88, § 11, it is enacted "That in all cases where an appeal is now allowed by law from the decision of the Commissioner of Patents, to a board of examiners provided for in the 7th section of the act to which this is additional, the party, instead thereof, shall have a right to appeal to the Chief Justice of the District Court of the United States for the District of Columbia by giving notice thereof to the Commissioner, and filing in the Patent Office within such time as the Commissioner shall appoint, his reasons of appeal specifically set forth in writing; and also paying into the

Patent Office, to the credit of the patent fund, the sum of twenty-five dollars.

"And it shall be the duty of the said Chief Justice, on petition, to hear and determine all such appeals, and to revise such decisions, in a summary way, on the evidence adduced before such a Commissioner, at such early and convenient time as he may appoint; first notifying the Commissioner of the time and place of hearing; whose duty it shall be to give notice thereof to all parties who appear to be interested therein, in such manner as the said judge shall prescribe.

"The Commissioner shall also lay before the said Judge all the original papers and evidence in the case, together *with the grounds of his decision*, fully set forth in writing, *touching all the points involved by the reasons of appeal;* to which the revision shall be confined."

One of the reasons of appeal in this case, is, 'That there is no real and substantial interference between the two applications.

The question of interference, therefore, is involved by the reasons of appeal, and must be decided by the judge. By limiting the jurisdiction of the judge, to the points involved by the reasons of appeal, the legislature has affirmed it to that extent.

The interference mentioned in the 8th section of the Act of 1836, must be an interference in respect to patentable matters; and the claims of the applicants must be limited to the matters specifically set forth, as their respective inventions; and what is not thus claimed, may, for the purpose of this preliminary inquiry, be considered as disclaimed.

The question then is, does Mr. Bain claim a patent for any matter now patentable, for which Mr. Morse claims a patent?

To answer this question, it is necessary to ascertain for what patentable matter Mr. Morse now claims a patent.

In his specification, filed Jan. 20, 1848, he says:

"What I claim, as my own invention and improvement, is the use of a single circuit of conductors *for* the marking of my Telégraphic signs already patented, for numerals, letters, words and sentences, by means of the decomposing, coloring or bleaching effects of electricity acting upon any known salts that leave a mark as the result of the said decomposition, upon paper, cloth, metal, or other convenient and known markable material. I also claim the invention of the machinery as herein described, for the purpose of applying the decomposing, coloring, or bleaching effects of electricity acting upon known salts as herein before described."

The Commissioner in his written decision in this case, says:— "Such use of a single circuit [i. e. to produce marks upon chemically prepared paper] is not the point at issue; *nor is this claimed by either party.* Said Morse claims using a single circuit of conductors, for a certain purpose, or in a certain way; viz., to mark his telegraphic signs; and also claims the machinery by which he accomplishes this purpose. Said Bain does not specifically mention in his claim, using a single circuit, though this must be considered as an essential part of his invention and claim, and is necessarily involved in the final clause of his claim, to wit: "So that in either case these form the *received communication*, substantially in the manner and with the effects described and shown."

The Commissioner proceeds — The third clause of the claim of said Bain with which the true claims of said Morse interfere, is as follows, to wit:

"Third. — The application of any suitable chemically prepared paper, without regard to the chemical ingredients used for such a purpose, to receive and record signs forming such communications, such signs being made by the pulsations of an electric current or currents, transmitted from a distant station, said current operating directly, and without the intervention of any secondary current or mechanical contrivance, through a suitable metal marking style that is in continuous contact with the receiving paper, thereby making marks thereon, which marks correspond with the groups of perforations in the paper *composing* the transmitted communication; or may be given by the pulsations from the spring 45 and block 46, so that in either case these form the received communication substantially in the manner, and with the effects described and shown; including any merely practical variations, analogous and equivalent in the means employed and the effects produced thereby."

The Commissioner, in his written decision, says:

"The invention, it will be seen by reference to the specifications of the parties respectively, does not consist in the use of the electric current to make marks upon chemically prepared paper; nor making marks through a single line of conductors; nor could a claim to either of these devices have been entertained as patentable, as they have been long known."

Again — It is said by the counsel of Mr. Morse, "it is admitted that neither could patent the *battery*, the *circuit*, the prepared paper, or the marking by the electro-chemical process — it was only a *new*

combination of the several parts so as to produce a new result, *or an old result in a better manner*, that either could patent."

Again — The Commissioner, in his "*reasons of decision*" says — "it is true, as Mr. Bain asserts, that no one can monopolize the use of air, fire, or water, but it is equally true that any one can monopolize the use of air, fire, or water upon certain principles of operation which he may have invented or discovered, and this is precisely what the respective claimants, in this case demanded as their rights, and gave rise to the interference, viz: each claimed the right to use and exclude others from using, galvanic power to mark certain signs [which signs have been already patented by said Morse] upon chemically prepared paper through a single circuit of conductors.

"*A single circuit of conductors*, consisting either wholly of wire, or in part of wire and part of earth, for telegraphic purposes *was not new*. The *signs or signals* to be marked *were not new*; — the same having been before patented by said Morse; — and *chemically prepared paper*, for receiving telegraphic signs by galvanism, *was not new*; the same having been patented in England, in 1838, by Mr. E. Davy. Moreover, the *use of a single telegraphic circuit*, for marking the aforesaid signs upon paper, *was not new*, the same having been before patented by said Morse.

"Neither party claimed any one, or any two of the above elemental features. *The invention of each was made up of the three combined*; and the advantages claimed to have been discovered by each, in these combined operations, were identical."

If then, these matters are not now patentable in themselves there is nothing patentable in Mr. Morse's claim, left to be interfered with, except his claim of a patent for his invention of the machinery described in his specification, or for his combination of machinery and materials, as described therein. The claim of each applicant, therefore, is reduced to the claim *for the combination of machinery and materials* which he has invented, and does not include any of the matters claimed in his specification which are not now patentable.

These combinations seem to me to be far from identical. Mr. Bain includes in his combination the use of the perforated paper for *composing* the communication; and of the style which passes the electric current through the perforated paper; and the machinery for transmitting the same communication to several different places at the same time. It is said that the style is not new; — but he makes it an ingredient in his combination — and in that respect, his combi-

nation differs from that of Mr. Morse, and it is a very important item in connection with the perforated paper. He includes, in his combination, new patentable matter with old matter, not patentable, and thereby makes a new patentable combination. This new matter thus introduced into the new combination is admitted to be patentable in itself without combination with the old unpatentable matter, and indeed it seems to be a great improvement in the transmission of telegraphic information.

But it is said that Mr. Bain is only authorized to obtain a separate patent for each of those inventions, and cannot claim a patent for his new combination of the old and new together. If, however, his new combination of old materials be patentable [which must be admitted, or it would not interfere with Mr. Morse's claim] it seems to be not the less patentable, because it includes the new matter in connection with the old. The old matter may not, in itself, be patentable, but joined to the new matter, a combination may be formed which may be patented. He is not obliged to take separate patents for each new patentable matter. He does not now ask for them; he may be willing to ask only for a limited use of those new matters, *to wit, in combination*; and not for an exclusive use of them for every purpose to which they may be applicable.

Mr. Godson (in p. 63,) says — "a combination or arrangement of old materials, when, in consequence thereof a new effect is produced, may be the subject of a patent. This effect may consist either in the production of a new article, or in making an old one in a better manner, or at a cheaper rate." "This manufacture may be made of different substances mingled together; or of different machines formed into one; or of the arrangement of many old combinations." "Each distinct part of the manufacture may have been in common use, and every principle upon which it is founded may have been long known, and yet the manufacture may be the proper subject for a patent. It is not for those parts and principles, but for the new and useful compound, or thing thus produced by combination, that the grant is made; it is for combining and using things before known, with something then invented, so as to produce an effect which was never before attained."

The counsel of Mr. Morse, in argument, said:

"It is obvious, and is admitted by our adversaries, that Morse's instrument is a very different thing, in its *form* and *structure* from Bain's." But *form* and *structure* are very important matters in

machinery; and if they enable the operator to do the work in a better manner, or with more ease, or less expense, or in less time, it is no interference; but is an improvement for which the inventor may have a patent.

When the application is for a patent for a combination of machinery and materials, form and structure become *substance*; they are of the essence of the invention; and an admission that Morse's instrument is a very different thing, in its form and structure, from Bain's, is an admission of a fact which is *primâ facie* evidence at least, that there is no interference between the two, and throws the burden of proof on the other side.

There was no evidence laid before the Commissioner of Patents upon the question of interference; so that he must have adjudged the interference upon a comparison of the two specifications; possibly without considering that the only patent which either could obtain, would be a patent for his own combination — all the materials, of which Mr. Morse's combination consists, being old and not now patentable.

The question is not now, whether the claims of Mr. Bain and Mr. Morse interfere as to matters not now patentable; but whether they interfere as to matters *now patentable;* and the only matter now patentable, in Mr. Morse's specification, is his own combination of machinery and materials. That combination constitutes his machine; and his machine is admitted to be a very different thing, in its form and structure from Mr. Bain's. Form and structure constitute the identity of machinery. The combination consists in *form* and *structure;* and the patent if issued, will, I presume, be issued for the *form* and *structure* of the instrument.

It being admitted that the form and structure of Mr. Bain's instrument is very different from Morse's, there can be no interference in that respect, and if form and structure constitute the identity of machinery there is no interference in the two instruments; and if the instruments are the combinations, or the result of the combinations, for which patents are now claimed, there is no interference in the two instruments in regard to any matter now patentable.

But it is not necessary to rely alone upon the admission of Mr. Morse's counsel to show that there is a great difference between the machinery used by the contending applicants to effect the object; that is, the rapid transmission of intelligence by the power of the electric current. Any one who will compare the two specifications and drawings and models, will at once perceive that difference.

A patentable improvement is not an interference.

The Commissioner in his written decision, says: "It appears from the records of the office, that the application by said Alexander Bain, subject of Great Britain, was made April 18, 1848, and upon examination of his claims, it was found that the before-mentioned claim could be *admitted to patent*, no invention of a like character, appearing in the public records of the office; nor in any printed publication. Prior, however, to the final issue of the case, the secret archives were consulted; and it was found that an application, filed by Samuel F. B. Morse, January 20, 1848, had been there deposited, in compliance with provisions of law, which presented claims conflicting with those, before mentioned, set up by said Bain."

This shows that but for the supposed interfering claim of Mr. Morse, Mr. Bain was entitled to his patent; and if there be no interference in respect to patentable matter, he is still entitled to a patent for his own combination.

But the counsel for Mr. Morse say: "There is an interference — that Bain's third claim palpably covers the whole of Morse's first claim; and, if granted, Bain could do all that Morse claims an exclusive right to do; he could write Morse's characters precisely as Morse does; and that therein consists the interference."

But the only matter now patentable, and claimed in Mr. Morse's specification, is *his peculiar combination of materials and machinery as therein described.* All the materials, used in that combination, are old; and he will not, under this patent, be entitled to the exclusive use of any of them separately, or in any other combination than that which he has described in his specification. There cannot be a patent for a *principle;* nor for the application of a principle; nor for an effect. Two persons may use the same principle and produce the same effect *by different means*, without interference or infringement, and each would be entitled to a patent for his own invention. — *Godson*, 63, 68, 74.

So, in the present case, although the power used by both applicants is the same, and the subject the same, yet, as the effect is produced by means which appear to me so different as to prevent an interference, *the question of priority of invention does not arise.* It is, therefore, not a case under the 8th section of the act of 1836, but under the 7th section of the same act. So that each of the applicants may have a patent for the combination which he has invented and claimed and described in his specification — provided he shall have complied with all the requisites of the law to entitle him to a patent.

If this were a doubtful question, I should think it my duty to render the same judgment, so as to give Mr. Bain the same right to have the validity of his patent tested by the ordinary tribunals of the country, which Mr. Morse would enjoy as to his patent; and finally, to obtain the judgment of the Supreme Court of the United States upon it. For if the Commissioner and the Judge should reject Mr. Bain's application for a patent, the decision would be final and conclusive against him, unless he could obtain relief by a bill in equity under the 16th section of the act of 1836, and the 10th section of the act of 1839; which, it is said, is doubtful.

I am, therefore, of opinion, and so decide:

That there is no interference in the claims of these applicants, in relation to any matter (contained in their respective specifications) *now patentable;* and, therefore, that Samuel F. B. Morse is entitled to a patent for the combination which he has invented, claimed, and described in his specification, drawings, and model. And that Alexander Bain is entitled to a patent for the combination which he has invented, claimed, and described in his specification, drawings and model; provided they shall respectively, have complied with all the requisites of the law, to entitle them to their respective patents.

I deem it unnecessary, therefore, to decide upon any other points involved by the reasons of appeal. W. CRANCH.

WASHINGTON, D. C. *March* 12, 1849.

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