A TREATISE

RELATING TO

LETTERS PATENT

FOR

INVENTIONS.

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A TREATISE

ON THE SUBSTANTIVE LAW

RELATING TO Dec 37

LETTERS PATENT

FOR

INVENTIONS.

By HENRY LUND, Esq.,

OF TRINITY COLLEGE, CAMBRIDGE, M.A., AND OF LINCOLN'S-INN, BARRISTER-AT-LAW.

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PREFACE.

THERE are two natural and useful divisions under which any system of law may be considered—The Substantive Law, and the Law of Procedure.

The one division may treat of the nature or definition of a right or a duty, and of the rules regulating the evidence required to render it cognizable from time to time: such as rules determining the sufficiency of a contract, or of a deed conveying land, the requisites of a will, of the specification of an invention, or the assignment of, or other dealing with a patent; the subject of the contract, devise or specification being first determined.

The other division may treat both of the practice of the courts in which any right or duty may be defended or enforced, and of the formalities required to lay a foundation for the right, or to remove it if wrongly obtained.

This work, at present, deals with the first division

alone of the Law relating to Patents, and professes to answer the following questions: What inventions can be patented? What are the nature and details of the contract which the inventor is said to make with the Crown? What are the essentials of a specification of an invention: In other words, What is the nature of the documentary evidence required to define and circumscribe the exclusive right to any patented invention? What considerations should be kept in view on the sale of, or other dealing with, Letters Patent? And lastly, What amounts to an infringement of a patented invention?

The formalities preceding the grant of Letters Patent will no doubt be shortly changed for some simple procedure; and the practice in actions for infringements, and in proceedings by *scire facias*, which belong to the general practice of the Law, is also under revision.

These alterations, as soon as perfected, will be added to this work in the form of an Appendix.

The Substantive Law on any subject is in a great measure an exponent of the wants and habits of the people, and should, therefore, with respect to the rights or duties of which it treats, be rather consolidated into well-digested propositions than

materially altered. The Law of Procedure, on the other hand, is entirely arbitrary, and no change can be too great or decisive, provided it combine certainty with expedition.

In the following pages an attempt is made to prepare for the consolidation of the Substantive Law relating to Patents for Inventions; and, in the mean time, to provide the Profession and Inventors with a methodical and complete, yet concise, treatise on this branch of the Law. The authorities cited are arranged in what appeared to be the most convenient groups, and the more important passages of each decision are quoted *verbatim*; since their safe application in practice frequently depends as much upon the precise words used, as upon the general tenor of the judgment. At the same time, these extracts are confined as strictly as possible to their immediate bearing on the precise point under discussion, and all needless description, however ingenious or entertaining, is omitted; so that the reader may deal with each part of the subject distinctly and in order.

H. L.

3, Hare Court, Temple,
May, 1851.

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ICTORIA, by the grace of God, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, to all to whom these presents shall come, greeting.

HEREAS A. B. hath by his petition humbly presented unto us, that he hath invented (here the exact words the title of the invention are inserted), which the petioner conceives will be of *great utility*: that he is the *rst and true inventor* thereof, and that the same hath *t been practised or used before in this kingdom* to the est of his knowledge and belief; the petitioner therere most humbly prayed that we would be graciously leased to grant unto him, his executors, administators and assigns, our royal letters patent under the reat Seal of the United Kingdom of Great Britain d Ireland, for the sole use, benefit, and advantage of s said invention within that part of our United Kingom of Great Britain and Ireland called England, our minion of Wales, and town of Berwick-upon-Tweed, r the term of fourteen years, pursuant to the statute in at case made and provided; and we being willing to ve encouragement to all arts and inventions which may for the public good, are graciously pleased to condend to the petitioner's request. KNOW YE THEREORE, that we of our especial grace, certain knowledge, d mere motion have given and granted, and by these

Recites the petition.

The granting words of the patent.

presents for us, our heirs and successors, do give a
grant unto *the said A. B., his executors, administr*
tors, and assigns, our especial license, full power, s
privilege and authority, that he the said *A. B., his e*
ecutors, administrators, and assigns, and every of the
by himself and themselves, or by his and their depu
and deputies, servants or agents, or *such others* as
the said *A. B., his executors, administrators and s*
signs, shall at any time agree with and no others, fro
time to time and at all times hereafter, during the ter
of years herein expressed, shall and lawfully may *mak*
use, exercise, and vend his said invention within th
part of our United Kingdom of Great Britain and Ir
land called England, our dominion of Wales, and tow
of Berwick-upon-Tweed, in such manner as to him t
said *A. B., his executors, administrators, and assigns,*
any of them, shall in his or their discretions seem mee
and that he the said A. B., his executors, administr
tors, and assigns, shall and lawfully may have a
enjoy the whole profit, benefit, commodity and a
vantage from time to time coming, growing, accruin
and arising by reason of the said invention, for an

Habendum for fourteen years.

during the term of years herein mentioned: To HAV
HOLD, exercise, and enjoy the said licences, power
privileges, hereinbefore granted or mentioned to b
granted unto the said A. B., his executors, administr
tors, and assigns, for and during and unto the full en
and term of fourteen years from the date of these pr
sents next and immediately ensuing, and fully to b
complete and ended, according to the statute in suc
case made and provided.

AND to the end that he the said A. B., his executor
administrators, and assigns, and every of them, ma
have and enjoy the full benefit and the sole use an
exercise of the said invention according to our gracio
intention hereinbefore declared, we do by these pr

nts for us, our heirs and successors, require and rictly command all and every person and persons, odies politic and corporate, and all others our subjects hatsoever, of what estate, quality, degree, name, or ndition soever they be, within that said part of our nited Kingdom of Great Britain and Ireland called ngland, our dominion of Wales, and town of Berwick-pon-Tweed, that neither they nor any of them, at any me during the continuance of the said term of fourteen ears hereby granted, either directly or indirectly *do ake, use, or put in practice the said invention or any art of the same*, so attained by the said A. B. as afore-id, nor *in any wise counterfeit, imitate, or resemble e same*; nor *shall make or cause to be made any ad-ition thereunto or subtraction from the same, whereby pretend himself or themselves the inventor or inven-rs, deviser or devisers thereof, without the consent, cence, or agreement of the said A. B., his executors, dministrators, or assigns, in writing, under his or eir hands and seals first had and obtained in that be-alf*, upon such pains and penalties as can or may be stly inflicted on such offenders for their contempt of is our royal command: and further be answerable to e said A. B., his executors, administrators, and as-gns, *according to law for his and their damages ereby occasioned.* AND, MOREOVER, we do by these resents for us, our heirs and successors, will and com-and all and singular the justices of the peace, mayors, eriffs, bailiffs, constables, headboroughs, and all her officers and ministers whatsoever of us, our heirs d successors for the time being, that they or any of em do not, nor shall at any time hereafter during the id term hereby granted, in any wise molest, trouble, hinder the said A. B., his executors, administrators, assigns, or any of them, or his or their deputies, ser-nts or agents, in or about the due and lawful use or

The prohibiting words of the patent.

A colourable imitation forbidden.

Power to grant licences.

Patentee and his executors, administrators, and assigns, entitled to damages according to law.

exercise of the said invention or anything relating thereto.

Patent may be revoked if contrary to law, &c.

PROVIDED ALWAYS, and these our letters patent are and shall be upon this condition, that if at any time during the said term hereby granted, it shall be made to appear to us, our heirs or successors, or any six or more of our or their privy council, that this our *grant is contrary to law*, or *prejudicial or inconvenient to our subjects in general*, or that the said invention is *not a new invention as to the public use and exercise thereof* in that said part of our United Kingdom of Great Britain and Ireland called England, our dominion of Wales, and town of Berwick-upon-Tweed, or *not invented and found out by the said A.B.* as aforesaid: then, upon signification or declaration thereof, to be made by us, our heirs or successors, under our or their signet or privy seal, or by the lords and others of our or their privy council, or any six or more of them, under their hands, these our letters patent shall forthwith cease, determine, and be utterly void to all intents and purposes, anything hereinbefore contained to the contrary thereof *in anywise notwithstanding*.

PROVIDED ALSO, that these our letters patent, or anything herein contained, shall not extend or be construed to extend to give privilege unto the said A.B., his executors, administrators, or assigns, or any of them, to use or imitate any invention or work whatsoever which hath heretofore been invented or found out by any other of our subjects whatsoever, and publicly used or exercised in that said part of our United Kingdom of Great Britain and Ireland called England, our dominion of Wales, and town of Berwick-upon-Tweed, unto whom our like letters patent or privileges have been already granted, for the sole use, exercise, and benefit thereof, it being our will and pleasure that the said A. B., his executors, administrators, and assigns

and all and every other person and persons to whom like letters patent or privileges have been already granted as aforesaid, shall distinctly use and practise their several inventions by them invented and found out, according to the true intent and meaning of the same respective letters patent and of these presents.

Proviso against the privilege being vested in more than twelve persons.

PROVIDED LIKEWISE, *nevertheless, and these our* letters patent are upon the express condition, that if at any time hereafter these our letters patent, or the liberties and privileges hereby by us granted, shall become vested in or in trust for more than the number of twelve persons, or their representatives, at any one time, as partners, dividing or entitled to divide the benefits or profits obtained by reason of these our letters patent (reckoning executors and administrators as and for the single person whom they represent, as to such interest as they shall be entitled to in right of such their testator or intestate), that then these our letters patent and all liberties and advantages whatsoever hereby granted shall utterly cease, determine, and become void, anything hereinbefore contained to the contrary thereof in anywise notwithstanding: PROVIDED, that nothing herein contained shall prevent the *granting of licences* in such manner and for such consideration as they may by law be granted.

Proviso requiring a specification of the invention.

AND ALSO, if the said A. B. shall *not particularly describe and ascertain the nature of his said invention, and in what manner the same is to be performed, by an instrument in writing, under his hand and seal,* and cause the same to be *enrolled in* our *High Court of Chancery*, within calendar months next, and immediately after the date of these our letters patent:

AND ALSO, if the said A. B., his executors, administrators and assigns, shall not supply or cause to be supplied for our service all such articles of the said invention as he or they shall be required to supply, in

such manner, at such times, and at and upon such reasonable prices and terms as shall be settled for that purpose by the master-general of our ordnance, or the principal officers of the ordnance for the time being, that then and *in any of the said cases* these our letters patent and *all liberties and advantages whatsoever hereby granted shall utterly cease, determine, and become void*, anything hereinbefore contained to the contrary thereof in anywise notwithstanding.

Letters patent to be void in certain cases.

AND LASTLY, we do by these presents, for us, our heirs and successors, grant unto the said A. B., his executors, administrators, and assigns, that these our *letters patent, or the enrolment or exemplification thereof*, shall be in and by all things good, firm, valid, sufficient, and effectual in the law, according to the true intent and meaning thereof, and shall be taken, construed, and adjudged in the *most favourable and beneficial sense for the best advantage* of the said A. B. his executors, administrators and assigns, as well in all our Courts of Record as elsewhere, and by all and singular the officers and ministers whatsoever of us, our heirs and successors, in that part of our said United Kingdom of Great Britain and Ireland called England, our dominion of Wales, and town of Berwick-upon-Tweed, and amongst all and every the subjects of us, our heirs and successors, *whatsoever* and *wheresoever*, notwithstanding *the not full and certain description of the nature or quality of the said invention, or of the materials thereunto conducing and belonging*. IN WITNESS whereof we have caused these our letters to be made patent. WITNESS ourselves at Westminster, this day of in the year of our reign.

By writ of ivy Seal.

(Signed by the Clerk of the Patents.)

TABLE OF CASES CITED.

Abbreviations used in the Third Column of this Table.

Assignment of Letters Patent . . .	*ass.*
Consideration for the grant of Letters Patent .	*cons.*
Infringement of Letters Patent . . .	*infr.*
Licence to use patented Invention . .	*lic.*
Novelty of ,, ,, . . .	*nov.*
Specification of ,,	
1st, as to the nature of the Invention .	*speci. nat. inv.*
2nd, manner in which it is to be performed .	*speci. man. perf.*
Spirit or substance of patented Invention . .	*spir. inv.*
Title and Specification must agree . .	*tit. and speci.*
True inventor	*true inv.*
Utility of patented Invention . . .	*uti.*

Names of Cases.	*Where reported.*	*Where found and for what purpose cited in this Work.*
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A TREATISE

ON THE

SUBSTANTIVE LAW OF PATENTS.

CHAPTER I.

ON THE CHARACTERISTICS OF A PATENTABLE INVENTION.

THE right of the Crown to grant to an inventor by the issue of Letters Patent, the exclusive profit for a limited time, of any improvement in the mechanical or useful arts, rests upon the Common Law, modified by a statute passed in the reign of James I., and these again are explained and illustrated by decisions in the courts of law.

These decisions, from the number and variety of the facts involved in all questions relating to Patents, are the principal source of the law on the subject, and its general rules are derived as inductions from particular instances, rather than fixed in any specific enactments. It is only, therefore, from its being in analogy with those decisions when in favour of the patentee, that an invention can be said to be patentable, or to be a good subject-matter for letters patent.

The grant, under the Great Seal, of various exclusive privileges to particular persons, has always been one of the prerogatives of the Crown, which the statute of James intended only so far to limit, as that the reward of useful ingenuity shall rather promote than interfere with the public interests.

The sixth section of this statute provides, "That any declaration (therein) before mentioned shall not extend to any letters patent and grants of privilege for the term of fourteen years or under hereinafter to be made, of the sole working or making of *any manner of new manufacture* within this realm to *the true and first inventor or inventors* of such manufactures, which *others at the time of making such letters patent shall not use*, so as also they be not contrary to law or mischievous to the state by raising prices of commodities at home, *or hurt of trade, or generally inconvenient.* The said fourteen years to be accomplished from the date of the first letters patent or grant of such privilege hereafter to be made; but that the same shall be of such force as they should be if this Act had never been made and of none other. (21 Jac. I. c. 3, s. 6.)

It is obviously the chief use, and it should be the prominent and prevailing intention, of a Treatise on the Law of Patents to provide *tests*, by means of definitions and examples, for deciding whether any practicable idea or piece of ingenuity can, as respects its benefit and profit, be exclusively secured to the inventor.

This indeed is emphatically the object of such a

work, whether intended to assist an inventor wishing to obtain an exclusive grant for any improvement in the useful arts, or any other person desiring to resist or displace the privilege when granted.

The *identity* or *imdividuulity* of the invention—what it amounts to, what is its distinctive merit—is the first question to be decided; the next, whether the invention is such as the statute of James contemplates, and analogous to inventions already patented, and declared to be well protected by a patent, after deliberate consideration in a court of law. No abstract propositions will be of much use in determining the last question, without examples to direct and facilitate their application; and, on the other hand, the examples must be collected in simple and convenient groups, or they will scarcely be available.

It will be seen, on referring to the statute just quoted, that the following peculiarities are requisite to an invention before it can become the subject-matter of letters patent. The invention must be—1st. Some *manner of manufacture;* 2nd. Some manner of *new* manufacture. The letters patent must be obtained by the *true inventor;* the space or country over which the grant is to extend being *the realm*, and the period of its duration *fourteen years* or under, *to be accomplished from the date of the letters patent.*

The Judicial Committee of the Privy Council have the power, by the 7 & 8 Vict. c. 69, to renew

the letters patent for another fourteen years, or any shorter period, when it can be shown, that the inventor has not been duly remunerated.

Utility in the invention, to the extent of being appreciable by a jury (Alderson, B., *Morgan* v. *Seaward*, Webs. Cases, 172), the amount being immaterial, is made the essential characteristic of *any manner of manufacture.*

This excludes mere fancies or abstract propositions, or the simple enunciation of a physical law or a law of nature, from claiming protection under letters patent. An idea must be *usefully applied* and made to produce some useful or vendible effects, or there is no manufacture: there is nothing to which the patent law can attach. If a mere abstract idea were patentable, its subsequent application by another person would be under the control of the patentee, who would thus stand in the way of the practical inventor, and the grant would be so far *to the hurt of trade and generally inconvenient* (*Morgan* v. *Seaward*, 2 M. & W. 562).

But supposing the originator of an idea, also provides a mode or way of usefully applying it; or even suppose he usefully applies an idea or thought suggested by another person, or one long and well known, but not as yet usefully applied: in either of these cases he will be entitled to forbid all other similar applications of the idea to the same object or purpose; although the utility which he pro-

duces is comparatively trifling, and the forbidden application is admitted to be a great improvement upon the subject-matter of a patent (*Neilson* v. *Harford*, Webs. Cases, 310).

This characteristic of *a patent right* may undoubtedly very often hinder the profitable employment of a certain amount of ingenuity, as well as prevent great improvements in some patented inventions. It is well known, that the degree and character of the ingenuity required to perfect, or vary the practical details of an invention, is common in comparison either with the genius or good fortune, which leads to the useful application of a mere thought or abstract idea; and therefore, as soon as such an application is made, some improvements in matters of detail would, in almost every case, be immediately produced. Now, to allow these to be put in practice without the consent of the patentee, during the continuance of his grant, would amount to its repeal—for instance, by the sale of a cheaper or better article. Whatever question there may be, as to the right of the public to the immediate enjoyment of any such improvements, there can be no doubt, that the improver is not entitled to profit at the expense of the patentee; as the improvements were the fruits of his usefully applied thought.

The inventor must be regarded as contracting, through the Crown, with the public for an exclusive grant for a given time; the production of some

benefit to the public being the consideration. He does not engage to produce the greatest benefit—which is not determinable, nor even any precise amount of utility of which an invention may be susceptible, nor to show any particular amount of ingenuity beyond the attainment of some utility. To hold, therefore, that the grant might be set aside by another person increasing the utility of the patented invention, would be in fact to declare that no consideration *ever* existed, that the public benefit conferred by the patentee was none at all; because, by further ingenuity, it might be increased. Besides, *the best ideas, or best first thoughts*, generally admit of great improvement in detail, and on that account would slip most easily from the hands of their original possessors.

The spirit or substance then, the main or leading idea of any useful invention, not solely the inventor's particular way of applying it, is within the meaning of the words *any manner of manufacture.*

The invention may be either any vendible article, made by the art or hand of man (Tindal, C. J., *Cornish* v. *Keene,* Webs. Cases, 517),—or machinery or improvements in machinery,—or additions thereto,—or some mechanical arrangement to manufacture a vendible article,—or a particular method or process, such as refining sugar (Derosne's Patent), or smelting iron (Neilson and Crane's Patents).

This construction gives to the words, *any manner of manufacture*, all possible comprehensiveness, without aiding mere fancies or going beyond the true intention of the statute of James. The law not only protects the slightest amount of useful ingenuity, (this element of a claim to letters patent being at present the only one under consideration,) but also enables the inventor to make the most of that amount (whatever it may be), by protecting the spirit or substance of the invention, and by giving him the fullest benefit of his first thought or main or leading idea.

Some confusion would be avoided if the words *spirit* or *substance* were used, instead of the word *principle*, of an invention.

The word *principle* is most frequently employed in reference to some abstract proposition, and therefore it has been repeatedly said, "You cannot have a patent for a principle; but that you may for a principle applied to some useful purpose." In other words, you may have a patent for a manufacture, not solely *for your particular way of applying your main or leading idea*, but, also *for the spirit or substance of such application.*

The next qualification of an invention within the statute is, that the manufacture shall be "*new*;" one "*which others at the time of making such letters patent and grant shall not use.*"

The policy of the law permits these exclusive rights by letters patent, expressly on the condition

that, they are not to the "hurt of trade, or generally inconvenient." It is obvious therefore, that whenever an article or piece of machinery, method —or process, is already in use and part of the public stock of information, it must be excluded from becoming the subject-matter of letters patent; otherwise, instead of being public benefits, letters patent would, in such cases, deprive the public for some time of what they were then unrestrictedly using and enjoying. A patent would lead to the obstruction, and not to the advancement, of trade and manufactures.

Use in public is the definition of an old invention; such a public use, or possession of an invention, amounts to publication, and will vitiate a subsequent claim to novelty in the invention. The article or other subject-matter need not be generally adopted by the public; for public is not equivalent to general, but distinguished from secret use. *Use in public*,—and *not in use* by the public—within reach of the public—before the date of the letters patent, is sufficient.

A description of an invention in a specification already enrolled, or in a book published or accessible in this country, before the date of the letters patent, will be a publication.

An inventor may destroy the novelty of his own invention by such an use of it, before the date of the letters patent, as amounts to publication.

And this mischief, if it is intended to take patents in England, Scotland, and Ireland, may even result from not sealing the three patents simultaneously.

For it has been held, (*Browne* v. *Annandale*, Webs. Cases, 433) that publication of an invention in any one of the three kingdoms is a publication for the whole realm; and since each specification, when enrolled, is a publication of the invention it describes, and is referred back to the date of the particular patent to which it belongs, the patent first sealed will be the only one having the essential element of novelty.

Whether the article or manufacture already published has been used in public, or described in a specification or book, before the date of the letters patent, it must be a perfected invention, and not simply a trial or experiment—not merely a hint or thought unapplied; for until an invention is perfected, to the extent at least of being of some use, it cannot be said to have been either *used* or *described* in any sense recognised by the law of patents.

Notwithstanding the words of the statute, "*which others, at the time of making such letters patent and grant shall not use;*" it has been decided that, if an invention has once been *in use in public*, it being out of use at the date of the patent is insufficient to confer upon it the necessary qualification of novelty; but whether any length of disuse, and, if so, what length, will cause the invention to be treated as if it had never been

published, is still undecided (*Household Company* v. *Neilson*, Webs. Cases, 710).

The knowledge of previous publication, either by actual user or by description, need not be brought home to a patentee of the same manufacture (*Stead* v. *Williams*, 7 Man. & G. 818); since an invention is no less in use, no less a part of the public stock of information, because a subsequent inventor may have been ignorant of that fact. So that every patentee takes the risk of his invention proving on inquiry to be new or old,—just as he takes the risk of its proving to be useful or not—entirely on his own responsibility. At the same time, if it can be shown to the Judicial Committee of the Privy Council that the patentee was not aware of the pre-existence of his invention, they may advise Her Majesty to confirm the letters patent or grant others—(5 & 6 Will. IV. c. 83, s. 2).

The remaining qualification of an invention required by the statute is, that it shall be original, or that the party who obtains the grant of letters patent shall be its "*true*" or *bonâ fide* inventor.

The same policy which requires a patented invention to be new, or not already in use in public, or within the reach of the public, also insists upon the grant being confined to the *true or bonâ fide inventor*. The object of the law is twofold: to benefit the public, and, in so doing, also to reward *the first and true inventor* by conferring an exclu-

sive but temporary advantage or profit upon him, as the person with whom the improvement originates. So that *a true inventor* is he who suggests the spirit, or substance of the invention (Alderson, B., *Minter* v. *Wells*, Webs. Cases, 132).

The importer of any foreign invention, or manufacture, not used or previously known in this country will also be accounted a true inventor, within the intention of the statute. "If the invention be new in England a patent may be granted, though the thing was practised beyond the sea before, for the statute speaks of new manufactures within the realm; so that if they be new here it is within the statute, for the act intended to encourage new devices useful to the kingdom, and whether learned by travel or study it is the same thing" (*Edgebury* v. *Stephens*, Davies' Pat. Cases, 36; and *Beard* v. *Egerton*, 15 L. J. 270, C. P.).

If the merit of the invention or importation belong to more than one person, or if the new manufacture involve the ingenuity of two or more persons, the patent must be granted to them jointly.

With this liberal interpretation of the sixth section of the statute of James in view, it is difficult to understand the expediency of denying a patent to the reviver of a forgotten or disused invention, which has been in that condition for twenty or thirty years. He would render *an invention useful to the kingdom which others at the time of such letters patent and grant did not use.* Indeed there appears no good reason for refusing

to limit the right of the public, in claims against patent, as against all other property.

Assistance in the application of the spirit or substance of an invention, as to the mechanical details from workmen and scientific men, will not vitiate a claim to be considered a true or *bonâ fide* inventor. This appears to be an unavoidable consequence of an inventor being entitled, not solely to the particular form, but also to the main idea, or spirit, or substance, of his invention. If he provide a method of usefully applying his first thought and obtain a patent, subsequent improvement by another, so as to increase its usefulness, will not affect his claim; and for the same reason assistance for a like purpose from others, before the grant, will be equally harmless.

In order to affect the validity of a claim to letters patent for an invention, on the ground that the patentee has copied or taken his invention from another person's ingenuity, and was therefore not a *bonâ fide* or true inventor, the fact of imitation or copying must be brought home to him, by showing, at least, the probability of his knowledge of the machine, or specification, or book, or whatever it may be, from which it is alleged that he obtained the spirit or substance of his invention. A hint from some trial or experiment is not sufficient. The last effort or trial may, by accounting for all the previous failures, constitute the real invention, and give the successful party a sound and just claim to originality. Till

perfected, an invention can neither be said to be part of the public stock of information, as already stated, nor can it be copied clandestinely, for it was not in existence. This objection to the validity of a claim to a patent is not distinguishable from a charge of fraud or falsehood, and requires that the evidence should be directed to the conduct of the patentee.

Unless the copy be made from some private source of information, or the patentee attempts to pass off another person's ingenuity as his own, the appropriate objection to the validity of the claim to a patent would be want of novelty.

Where the publication is doubtful, either of the two objections of want of novelty or want of originality may be made against the same invention. And a person may be a true or *bonâ fide* inventor, and yet, on account of the previous publication of his invention, although totally without his knowledge, have no claim to letters patent.

As an inventor may destroy his own title by a publication of his invention before the patent is sealed, so the same mischief may be brought about by a like publication by a stranger; and then, as neither the applicant for the letters patent nor the stranger could unite the two requisites of the first publisher and a true inventor, no grant can be made, and the inventor will lose his right to a patent. The stranger would want the essential qualification of being *bonâ fide* or true inventor; the true inventor that of being first publisher. These must be combined along with sufficient in-

genuity in the invention to amount to usefulness, to constitute a good claim. So that a patentee of an invention must not only be *a true* inventor, he must also be *the first* inventor—the person who first publishes the invention; that is, he who first applies to the Crown for a grant.

He may be one amongst two or three equally *true* or *bonâ fide* inventors; unless, however, he be the first who applies for the grant he cannot be the patentee of his own invention. The two qualifications must be found in the same person.

The several requisites of a claim to letters patent, along with a sufficient description or specification of the invention (to be enrolled in Chancery within a given time from the date of the letters patent), are said to constitute the consideration for the grant. As soon as the invention is shown to be useless, or not new, or not invented by the patentee, or insufficiently described, the consideration fails, the patent is voidable, and the contract between the Crown, on behalf of the public, with the patentee is at an end. To preserve the integrity of the consideration, the invention or inventions claimed need not be all useful (*Haworth* v. *Hardcastle*, Webs. Cases, 483); it is sufficient if the subject-matter of the grant be not entirely useless: but it must be all new (*Morgan* v. *Seaward*, 2 M. & W. 561), so far as its spirit or substance is concerned, and all to the same extent invented by the patentee.

The elements of a good specification will form the subject of the next chapter.

The following propositions are the result of the above analysis of the substantive law of patents for inventions :—

Propositions relating to the character of the ingenuity required in a patentable invention, and the extent of an exclusive right under letters patent.

I. That some utility in an invention, its amount being appreciable by a jury, is the essential characteristic of any manufacture within the statute.

II. That the rights of a patentee are not restricted to the particular useful application, or embodiment of his first thought, or main or leading idea of his invention ; but extend to the exclusion of all other applications of that thought or idea, provided they are identical with his in spirit or substance.

Propositions relating to the novelty of the invention.

I. That an invention loses its claim to novelty by use in public, (the word *public* not being equivalent to general, but distinguishable from secret use,) or by a description in a specification or book, if either the use or description be prior to the sealing of the letters patent ; provided that whatever is alleged to be so published was a perfected invention, and not simply an abandoned trial or experiment.

II. That the fact of the invention not being in use at the time of taking out the letters patent is of no consequence; provided it has been once published, and was then a perfected invention.

III. That it is not necessary to bring the knowledge of the prior publication of an invention home to a subsequent patentee, in order to invalidate his patent.

Propositions relating to the qualifications of the true or bonâ fide *inventor*:—

I. That the true inventor is he who *suggests* the spirit or substance of the invention.

II. That the claim to be a true inventor is not injured by obtaining the assistance of workmen and scientific men to perfect the details, or to extend the useful application of the main or leading idea of his invention.

III. That if the invention is alleged to be a copy, some probable knowledge, at least, of the perfected invention, or of the description of such an invention, (not merely of an abandoned experiment or hint,) from which it is said to be taken, should be brought home to the patentee; or his claim, as a true or *bonâ fide* inventor, will not be affected.

Examples illustrating the Proposition, that some Utility in an Invention—its amount being appreciable by a Jury—is the essential characteristic of any manner of Manufacture *within the Statute.*

A MERE thought, that is skill, without its useful application, is clearly not a manufacture.

Losh v. *Hague*. Application of a wheel used on common roads to railways.

In *Losh* v. *Hague* (Webs. Cases, 207), the right to make a peculiar description of wheels to be used on railways, and patented by the plaintiff, was the subject in dispute.

It appeared, during the trial, that similar wheels had been used before the patent, but *not on railways;* and Lord Abinger told the jury that this opened the 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 singeing gauze, somebody else afterwards applied a lamp supplied with gas for singeing 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. (*Hall* v. *Bost and others*, Webs. Cases, 100.) 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.

Difference between a new contrivance to an old object and an old contrivance to a new object.

"In the case the 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 50,000 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?"

New use of an old art not patentable.

The application simply of what is old to a new purpose, or the new use of an old art, is not patentable.

Steiner v. Heald. Extraction of *garancine* or colouring matter from spent madder.

In *Steiner* v. *Heald* (2 Car. & K. 1022), the invention patented was for extracting from spent madder, a certain colouring matter used in dying, and known by the name of *garancine*. It appeared in evidence, that *garancine* had been made from *fresh* madder, by means of sulphuric acid and heat, before the date of Steiner's patent; and that the process for making *garancine* from *fresh* madder, and *spent* madder are the same. It was also in evidence, that fresh madder contains a portion of free colouring matter, which may be extracted from it, by merely boiling it in water; and that it also contains a further and considerable quantity of colouring matter, which cannot be obtained by such boiling. That this further quantity of colouring matter resides chiefly in the vegetable fibre of the root, and in very small quantities in the lime, magnesia, &c., which the root contains; but by submitting the madder to the action of an acid, the resi-

due of the colouring matter can be set *free*, so as to be capable of being extracted by boiling water. And Pollock, C. B., said: "It is nothing but a patent for a process perfectly well known, and which is available with fresh madder to get a great deal more madderine (garancine), than you can get in any other way. It is applying the same process to madder that has been used; and the moment that the witness stated that, *mutatis mutandis*, it is merely applying Papin's Digester to bones which have been merely boiled, it struck me there was an end of the matter." And again, ... "He (the witness) says, this invention is neither more nor less than this:

"Supposing a person has got a patent for using Papin's Digester, to get all the gelatine that can be abstracted from fresh bones; somebody finds, that the bones which have been merely subjected to the common process of boiling have a great deal of gelatine in them, and he says, 'I will apply Papin's Digester to these bones, and I will get the balance of gelatine that is left by the common imperfect process.' That was the description of the witnesses, which seems to me to bring the question to the clearest point of fact, that can very well be presented. *Crane* v. *Price* is distinguishable from this, by there really being some difference: here there is none.

"A person discovers a process, by which he

can get from fresh madder a large quantity of an article, which I must now take to be well known, called garancine. Somebody applies precisely that same process to madder, that has been merely boiled. There is no magic in a name, or in any language that could be used. The boiling of madder gets out only some of it. This process gets out the rest of it. And in my opinion, in point of law, if the matter is reduced to that, you cannot take out a patent for using a perfectly known process, to get the residue of an article, from a material which is known to furnish it, the process being one by which you could get in the first instance more, or the whole of the article, and by your use of the process you merely get the residue, which the common process left behind. I think all the instances, that I have alluded to, apply distinctly to this. The case that was put last night, and which was adopted by the witness in giving his answer, clearly applies to it. If it was discovered that bones in a certain state, found in old caves, had some gelatine left in them, I do not think you could take out a patent for getting gelatine out of them by using Papin's Digester. If you adopt some new process, then you may do it. In the article of tea this is precisely the same thing. It might be possible to make that argument, to some extent, not so grave and dignified, as the one that is immediately before us ; but I am

The use of a known process to get the residue of an article which a common process left behind not patentable.

clearly of opinion, that if there were an article made from fresh tea, a person could not take out a patent for using precisely the same process to tea leaves, that had been subject to the common infusion and only given out a portion of their virtue. So, with respect to coffee, if there were a process of getting caffeine. And if the same process precisely be applied to coffee grounds, for the purpose of getting the residue of the caffeine, I do not think a patent could be taken out for that. There is no magic in calling this spent madder: it is madder that has undergone a process, by which its whole virtues are not extracted. It appears to me, that that is precisely the same as if you applied a process to grapes already imperfectly squeezed, by which you squeezed a little more juice out of them than was formerly done. I do not think you could have a patent for that, for see what it would lead to; if a person in manufacturing districts, where they extract metal from certain ores, were to find that by applying a process to an ore, you could get ten per cent. more of the metal, and it then became worth working the refuse that might stand around in heaps—covering many acres, possibly—it would be just worth while to work that over again by the new process. I am clearly of opinion, that no stranger could step in and say, 'Now, I will have a patent for using your process, which you have given to

the public. I will have a patent for using it to this old rubbish, because it may yield some ore.' I do not think that would do. It appears to me, that so far from the public benefit being consulted by that, the argument tends precisely the other way. It seems to me, therefore, that these facts being before me, and being ascertained to be such as I have stated, I ought to direct the jury, in point of law, upon the fifth plea, that the said alleged invention was not and is not any manner of manufacture, for which letters patent could lawfully be granted, according to the true intent and meaning of the statute, in such case made and provided."

In *Manton* v. *Parker*, (Davies' Pat. Cases, 327), the patent was for inprovements in gun-locks, by making a hole in the lock large enough for the passage of the air from the barrel, but not so large as to admit the powder, by which means the air is let through and the powder kept in the touch-hole. This was found to be impracticable, as when the hole was large enough for the first purpose, the powder followed the air, and the invention being thereby useless, the patent was held bad. And the case of *Brunton* v. *Hawkes*, (4 B. & Ald. 546), is to the like effect. The patent was (amongst other inventions) for improvements in ships' anchors, "for making in one entire piece that which was formerly in two. The two flukes of the

Manton v. *Parker*. Air-hole in gun-locks.

Brunton v. *Hawkes*. Ship's anchors.

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 the 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 in two pieces? I think not." (Bayley, J.) And where the patent was for improvements in making buttons, by the substitution of flexible for metal shanks, and not for accomplishing this, by an application of a toothed ring or collet, Littledale, J., observed, "Neither the button nor the flexible shank was new; and they did not, by merely being put together, constitute such an invention as could support this patent." Parke, J., said that "The specification, after having described the mode of using the collet, concludes by repeating, what is also stated in the beginning, that the object is the substitution of a flexible material in the place of metal shanks. I thought, at first, we might infer the substitution here spoken of meant the substitution by the particular method which has been relied upon, namely, by the toothed collet. If so, the patent might have been good. But it does not appear, that that is claimed as a part of the invention; it is admitted that other methods will answer the purpose. I think, therefore, that the plaintiff's

No patent for making in one piece what had been made in two.

Saunders v. *Aston.*

Making buttons.

The mere union of a particular button and shank not patentable.

claim by this patent cannot be supported." *Saunders* v. *Aston*, 3 B. & Ad. 886).

In both these last cases, it must be taken, that there was no useful result; or, if any existed, it was not claimed by the patentees.

Kay v. *Marshall.* Placing the rollers of a spinning machine at a distance from each other, suitable to spinning flax in a macerated state, not sufficient invention for a patent.

In the case of *Kay* v. *Marshall*, (5 B. N. C. 499,) a patent had been obtained for machinery to prepare flax by maceration, and for improved machinery to spin the flax, at a shorter reach, than had before been practised.

The question, as to the validity of the patent, was referred by the Master of the Rolls to a Court of Law.

The patentee described his improvement in spinning machinery to consist, in placing the drawing rollers, only two and a half inches from the retaining rollers. And Tindal, C. J., upon delivering the judgment of the Court said: "Now whether a patent can be taken out, for placing the retaining rollers and the drawing rollers of a spinning machine (which machine was known and in use before) within two inches and a half of each other, under the circumstances stated in the case, is the real question between the parties; and we think it cannot. For it appears, from the indorsement upon the *posted*, that before the granting of this patent, flax and other fibrous substances were spun with machines, by which the reach was varied according to the staple or fibre of the article to be spun, and that that had been a fundamental

principle of dry-spinning, known and used before the granting of this patent; and further, that the reach used in cotton spinning had been less than two inches and a half. The application therefore, of a reach of two inches and a half to the spinning of flax, when in a state of maceration, by which the fibre of flax will not hold together, beyond two inches and a half, does not appear to us to be any new invention or discovery; but is *merely the application of a piece of machinery, already known and in use, to the new macerated state of the flax.* The fundamental principle of dry-spinning was, that the reach varied according to the length of the staple or fibre of the article to be spun; and spinning machines were in use, either with the reaches fixed or connected with slides, so that, their distance might be varied, according to the length of the fibre of the article intended to be spun, and, consequently, there is nothing new in applying the use of a spinning machine, with a reach of such a degree of shortness, as would suit the continuity of the roving of the flax after it is macerated. It is to be remarked, that the application of moisture in spinning flax, for the purpose of separating the fibres and reducing the length of the staple, was not new in practice, and had been resorted to under Hall's patent, though in a different manner from that employed upon this occasion. Now suppose

a patent to have been first obtained for some entirely new method, either chemical or mechanical, of reducing the fibres of flax to a short staple, we think, that a second patent could not be taken out for an improvement of machinery in spinning flax, which consisted of nothing more than the spinning of the short staple of flax, by a spinning machine with a reach of a given length, not less than that already in use for the spinning of cotton; the effect of which would be, to prevent the first patentee from working his invention with the old machine at the proper reach."

Morgan v. Seaward.

An invention altogether useless not within the statute of James I.

And, in *Morgan* v. *Seaward* (2 M. & W. 562), Parke, B., said: "A grant of a monopoly of an invention, which is altogether useless, may well be considered as mischievous to the state, to the hurt of trade, or generally inconvenient, within the meaning of the statute of James I., which requires, as a condition of the grant, that it should not be so; for no addition or improvement of such an invention could be made by any one during the continuance of the monopoly, without obliging the person making use of it to purchase the useless invention."

In these cases there was thought, skill or invention, without a useful or beneficial result, which is not *any manner of manufacture.* But when a thought or invention is usefully applied, (keeping the question of novelty or

But if useful, the utility may arise from the omission merely of

something then in use.

originality out of view for the present,) it is within the statute.

It may be merely the omission of something then in use, as of a mandril in the manufacture of tubes.

Russell v. *Cowley.*

Making tubes without a mandril.

In *Russell* v. *Cowley* (Webs. Cases, 467), Lord Lyndhurst, C. B., said: "The invention, as I understand it, in fact without referring at present to the objection made to the form of the specification, is to make tubes of this description (gas tubes) without the use of the mandril, that is, to weld them without hitting them on any solid surface, or without hammering them on any solid surface; and though that seems to be a very simple invention, it has been productive of great advantages; inasmuch as it has enabled the manufacturer to construct pipes for gas and other purposes very correctly, and also of lengths much beyond what could be done previously to this discovery. I think therefore, in fact, practically it is a new invention, and an invention of great importance."

I. this case, any doubt as to the sufficiency of the invention to be within the statute is entirely removed by its usefulness. Again, in *Minter* v. *Mower*, the plaintiff claimed, as patentee, "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 on the back." It appeared, at the trial, that chairs

Minter v. *Mower.*

Self-adjusting chair.

had been made with this peculiarity in their construction; but so much encumbered by other arrangements, as not to be effective, or even known to exist. It was held, that a claim to the self-adjusting leverage would have been good, although the patentee should have done no more than remove these incumbrances (Webs. Cases, 142).

In *Neilson* v. *Harford* (Webs. Cases, 314), the invention was for the use of hot blast in furnaces, and Parke, B., said, "Its utility would be sufficient if productive practically of some benefit, no matter how great, provided it is sufficient to make it worth while (the expense being taken into consideration) to adapt such apparatus to the ordinary machinery in all cases of forges, cupoles and furnaces, where the blast is used." *Neilson* v. *Harford.* Amount of utility not material.

And this view, of the required amount of utility in a patented invention, is in accordance with the earlier decisions.

In the case of *Boulton and Watt* v. *Bull*, Eyre, C. J., having stated the invention was for decreasing the consumption of steam, said, "It professes to lessen the consumption, and, to make the patent good, the method must be capable of lessening the consumption to such extent as to make the invention useful" (2 H. Bl. 498). *Boulton* v. *Bull.*

Again, in *Rex* v. *Arkwright* (Davies' Cases, 61), it is laid down, that, if there be anything *Rex* v. *Arkwright.*

material and new, which is an improvement of the trade, that will be sufficient to support a patent. And in *Huddart* v. *Grimshaw* (Webs. Cases, 868), Lord Ellenborough said, "There are common elementary materials to work with in machinery; but it is the adoption of these materials *to the execution of any particular purpose, that constitutes the invention;* and if the application of them be new, if the combination in its nature be essentially new, and 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."

Huddart v. Grimshaw.

In the case of *Lewis* v. *Marling* (Webs. Cases, 488), the invention was for shearing woollen cloths. It appeared that machinery carrying shears to shear cloth from list to list was known; rotary cutters, to shear from end to end, were also known; but rotary cutters to shear from list to list, the invention claimed, were not known, though useful. The patent was held to be good.

Lewis v. Marling.

Shearing by rotary cutters from list to list.

As long as the invention is at all useful, the law is satisfied. "It is not for you to consider to what extent the thing is useful. If it is a useful invention, then it is a subject to be protected by a patent; and if, on the other hand, it is of no use, then it is no subject to be protected by a patent. The issue

Morgan v. Seaward.

Whether the invention be of any use at all is the question.

is, whether it is of any use at all; and I think you cannot entertain a doubt that the improvement in the paddle-wheels is of use" (Alderson, B., *Morgan* v. *Seaward*, Webs. Cases, 172).

The variation of the means employed to obtain any particular end, if the result be useful, will constitute an invention entitled to letters patent.

Hullett v. Hague. Variation of means sufficient; as a coil of pipes instead of small tubes, to promote the evaporation of a liquid.

In the case of *Hullett* v. *Hague* (2 B. & Ad. 370), this doctrine was adopted. The invention claimed by the plaintiff was for promoting the evaporation of liquids, by forcing, by bellows, hot or cold air through the liquid to be evaporated. The air was passed from large tubes, communicating with the bellows, into smaller perpendicular tubes, reaching from the bottom of the boiler through the fluid. The invention claimed by defendant consisted of a coil of pipes lying at the bottom of the boiler, perforated with small holes, or of a shallow cullender, placed at the bottom of the boiler, through which the air was to be forced. Each invention effected the same object by different means, and it was held that both were patentable. The idea of passing air through a liquid, to promote its evaporation, was not claimed by either party.

Crane v. Price. A combination of things, well known, if it

In *Crane* v. *Price* (Webs. Cases, 407), the patent was for "the application of anthracite, or stone coal and culm, combined with the

produce a better or cheaper article, is a patentable invention; as the use of stone coal and hot-air blast in the manufacture of iron.

using of hot-air blast in the smelting and manufacture of iron from iron-stone, mine, or ore." The hot-air blast was the subject of a then existing patent by Neilson, for heating the air in a chamber between the blowing apparatus and the blast furnace, by which the heat in the furnace became much greater than when the air was blown into the furnace at its ordinary temperature. Many attempts had been made from time to time to use anthracite, or stone-coal, in the smelting of iron, since it is found in large quantities in Wales, and is not applicable to domestic purposes, but they all failed: "in a short time the twires were shut up, the blast could not get in; it was all clogged." Crane's patent was simply for the combination of the hot-air blast and anthracite coal. He made no claim to either separately; but only to the idea or thought of using them together, and as the result was a much *better iron and at a less cost*, it was held to be a good subject-matter for a patent. Tindal, C. J., on delivering the judgment of the Court, observed, after stating the facts, "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, such combination is an invention or manufacture intended by the statute, and may well become the subject of a patent."

He then cites the opinion of Abbott, C. J., that a patent may be had for a new process to be carried on by known implements, or elements acting upon known substances, ultimately producing some other known substance, or producing it in a cheaper or more expeditious manner, or a better or more useful kind (*Rex* v. *Wheeler*, 2 B. & Ald. 359). And the decision of Lord Eldon, that there may be a valid patent for a (useful) combination of materials previously in use for the same purpose, or even for a (useful) method of applying such materials (*Hill* v. *Thompson*, 3 Mer. 626), and continues,—"There are numerous instances of patents which have been granted, 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;" and he cites, in support of this opinion, the cases of Hale's patent, for applying the flame of gas to singeing off the superfluous fibres of lace; where a flame of oil had been used before for that same purpose (*Hall* v. *Boot*, Webs. Cases, 100). 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

Rex v. Wheeler.

Hill v. Thompson.

Hall v. Boot. Singeing fibres of lace.

before in the filtering of almost every other liquor, except the syrup of sugar (*Derosne* v. *Fairie*, Webs. Cases, 154). Hill's patent, for improvements in the working of iron: in which 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 (*Hill* v. *Thompson*, Webs. Cases, 249). And, Daniells' patent, taken out for improvements in dressing woollen cloth, where the invention consisted in immersing a roll of cloth, manufactured in the usual manner, in hot water (*Rex* v. *Daniells*, Godson on Pat. 274).

Derosne v. *Fairie.*

Charcoal as a filter for the syrup of sugar.

Hill v. *Thompson.*

The use of slags in the operation of smelting.

Rex v. *Daniells.*

Dressing woollen cloth in hot water.

In the case of *Gibson* v. *Brand* (Webs. Cases, 633), the claim was for "a new or improved process or manufacture of silk, and silk in combination with certain other fibrous substances;" and Tindal, C. J., said, "Undoubtedly there is very strong reason to suppose, if the specification is carefully and properly prepared, so as to point out with great distinctness and minuteness what the process is, such a patent may be good in law. Such certainly was the opinion of Chief Justice Eyre (in *Bolton and Watt* v. *Bull*, 2 H. Bl. 468-500); and such also appears to have been the opinion (carefully guarded against any abuse of the doctrine) of Lord Tenterden (in *Rex* v. *Wheeler*, 2 B. & A. 350), who says

Gibson v. *Brand.*

A process may be patented.

Boulton v *Bull.*

Rex v. *Wheeler.*

that "the subject-matter of letters patent, *i. e.* the word manufacture, as used in the statute of James, has generally been 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 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, also 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 of a better or *more useful kind.*"

It is no objection to the subject-matter of a patent, that the quality or degree of the invention claimed is too small, and the labour and expense required to perfect it too light.

Crane v. Price. The amount of labour or thought expended not material.

In *Crane* v. *Price* (Webs. Cases, 411), Tindal, C. J., said: "In point of law the labour of thought, or experiments, 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 experiments and profound research, or whether

by some sudden and lucky thought, or mere accidental discovery."

There are several other cases supporting the doctrine, that as long as the invention be useful, the amount of skill displayed is not material to the validity of a title to a patent right. Such as the case of the water tabies, discovered by a man's spitting on the floor. The case is mentioned in Buller's Nisi Prius; but more fully explained in the course of an argument, by the late Mr. Bell, Q. C.,—"It was not necessary to show that an invention was the result of long application or deep skill. He remembered that, many years ago, ladies wore flowered tabies. The method of working the flower was discovered by mere accident; a man spat upon the floor, placed his hot iron upon it, and observed that it spread into a kind of flower. He afterwards tried the experiment upon linen, and found it produced the same effect. He then obtained a patent, and lived to make a considerable fortune." (Webs. Cases, 54, note).

Water tables.

And, further, every portion of the invention need not be useful; it is sufficient if it be useful in the whole, and that whatever may be useless be no material part of what is claimed by the patent. A patent was obtained for "certain machinery or apparatus adapted to facilitate the operation of dying calicoes, muslins, linens, or other similar fabrics;" and the

Haworth v. *Hardcastle.* Dying calicoes, &c. Every portion of the invention need not be useful.

invention consisted of a carriage moving freely on guides or supports, from one end of the dying-house to the other, and provided with cylinders or drums, which were made to revolve, so that the wet cloth was wound in folds off them, and dropped over the rails or staves beneath the carriage as it moved along; the depth or length of the folds being regulated, by the length of cloth given out, during the passage of the carriage from one stave to the next. When the cloth was dried, it might be wound on the drums by drawing the carriage back to the end of the dying-house, from which it started. At the trial it was proved by several witnesses, that the machine would not take up some descriptions of cloth. The jury found the machine useful on the whole, although they agreed it would not in some cases take up the cloth, and the Court of Common Pleas decided, "that if the jury think it useful in the general, because some cases occur in which it does not answer, we think it would be too strong a conclusion to hold the patent void" (*Haworth* v. *Hardcastle*, Webs. Cases, 484).

Lewis v. Marling. The claim of what is useless, if not the essence of the invention, is immaterial.

In the case of *Lewis* v. *Marling* (Webs. Cases, 495), the patent was for shearing cloth. Amongst other arrangements, a piece of plush is fixed upon the surface of a cylinder, to answer the purpose of [illegible]ush for raising the wool. The Court were [illegible] opinion, that the

plush was not an essential part of the machine, although claimed as an invention; and Lord Tenterden, C. J., said, "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 the 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."

Examples illustrating the Proposition, that the rights of the Patentee are not restricted to the particular useful application, or embodiment of his first thought, or the main or leading idea of his invention; but extend to the exclusion of all other applications of that thought, or idea, provided they are identical with his in spirit or substance.

Minter v. *Wells.*

Self-adjusting chair.

In *Minter* v. *Wells*, the patent was for "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;" so that the essence of the invention consists in the chair having what he calls a self-adjusting leverage; that is to say, one which, by the pressure on the seat, raises the back, and by the pressure against the back raises the seat, and that whatever force is applied to disturb the equilibrium, the moment this is taken off the body remains in the position in which it was left. The essence of the claim to invention, and undoubtedly his claim, is the application of a self-adjusting leverage to the chair" (Alderson, B., in *Minter* v. *Wells*, Webs. Cases, 130).

On a motion for nonsuit, on the ground that the specification was for a principle, the plaintiff having summed up the whole of the patent in his claim to the principle and not to any particular means, it was argued, either 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. And that the plaintiff, by his specification, has appropriated to himself a first principle in mechanics, viz., the lever, and therefore no one else may use it. To which Lord Lyndhurst, C. B., replied, "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 (of a chair)." And in reply to what was the combination which saved the patent from being merely for a principle, his Lordship continued, "The application of a self-adjusting leverage producing the effect constitutes the machine, and the right to make the machine by 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.' . . . . . He claims 'every machine consisting of a self-adjusting leverage producing that particular effect in a chair.'" In *Jupe* v. *Pratt* (Webs. Cases, 144), the same doctrine was admitted, although not expressly laid down. The subject-matter in this case was an expanding table, so constructed, that the sections, which composed the surface of the original or unexpanded table, might be made to diverge from a common centre, and the table thereby enlarged, by inserting leaves or pieces in the openings caused by the divergency. The patentee did not confine himself to the particular mechanical arrangements he described, for causing the sections to diverge from a common centre. In the course of the argument, Alderson, B., on allusion being made to the case of *Crossley* v. *Beverley* (Webs. Cases, 106), observed, "It was for measuring the quantity of gas that was supplied to every indi-

Jupe v. *Pratt.* An expanding table.

Crossley v. *Beverley.* Gas meter.

vidual, in order that they might not take it without its being known. There never was a more instructive case than that. I remember very well the argument put by the Lord Chief Baron (Lord Abinger), who led the 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 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 have invented some mode of carrying it into effect. But then you must start with having

An applied principle is protected by a patent from all similar applications.

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."

Russell v. Cowley.

In *Russell v. Cowley* (Webs. Cases, 468), already quoted above, the patent was for manufacturing tubes for gas, and other purposes,

Making tubes without a mandril.

by heating the iron of which they are made in a blast furnace, and immediately passing it through swages, or some such instruments, without the use of any mandril or other internal support. A piece of flat iron is prepared for welding by being turned up at the sides till the edges meet, or nearly so. It is then put into a hollow fire, and, when at the point of fusion, drawn by a chain attached to a draw bench through a pair of dies, by which means the edges of the iron became welded together. The defendant passed tubes, without any internal support, through grooved rollers, by which it was alleged they were completely welded; and afterwards through an instrument, called a scorpion, merely, as he contended, to scrape and

lengthen, and not to weld the tubes. But it appeared the welding could not be effected without the scorpion, which was in point of fact the plaintiff's die.

The plaintiff obtained a verdict, as the defendant's method was an infringement of his patent, the roliers being merely introduced as a screen. And the verdict was supported by Lord Lyndhurst, C. B., on the motion for the new trial, in these words (although the immediate point in discussion was the sufficiency of the specification):—"Now, what does that amount to but this? (after quoting the specification). I have described the apparatus by which these prepared tubes of iron, having nothing in them, are welded together; I have described the particular apparatus by which that is effected. I do not confine myself to that precise description of apparatus, but these previously prepared tubes of iron, which I have described, may be heated to a welding heat—and may by variations in this apparatus be drawn through dies or bolts, or formed in this way;" and his Lordship then proceeds to show that, notwithstanding some obscurity in the specification, the principle, or rather the spirit or substance of the invention, is manufacturing "tubes for gas and other purposes, by welding them without the use of a mandril, or internal support, by which certain advantages are

produced." So that the use of rollers and dies together (all internal support being wanting) was only a colourable variation of the plaintiff's right; and, therefore, an infringement.

Walton v. *Potter.*

Elasticity in cards, for carding wool, &c.

In the case of *Walton* v. *Potter and Horsfall* (Webs. Cases, 586), the object of the patent was to increase the elasticity of cards for carding wool, cotton, &c., by substituting caoutchouc, or India rubber, for the fillets or sheets of leather used in the construction of ordinary cards. This method added the elasticity of India rubber to the elasticity of the wire dents or teeth, and so greatly increased the efficiency of the card, by enabling the teeth to give way rather than bend. Walton described a method of cutting the India rubber into layers from the blocks as imported, and joined together formed fillets. These fillets when furnished with dents or teeth, were to be nailed or cemented to the board in the usual manner. Potter and Horsfall subsequently obtained a patent "for the manufacture of a new material for receiving the wire teeth of cards." It consisted of a woven fabric passed through India rubber varnish or cement, till both sides were covered with a thick coating of India rubber. The wire dents, or teeth, were then inserted as directed in Walton's patent, and the cloth applied instead of leather as in the ordinary cards. But Potter and

Horsfield's patent was decided to be an infringement of Walton's. Increased elasticity, in the effect of the cards, was the spirit or substance of Walton's patent. Tindal, C. J., in his summing up to the jury, 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 it 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" . . . . . "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 men of ingenuity to obtain

a patent for the same object; there may be many roads leading to the same place, and if a man has—by dint of his own genius and discovery, after a patent has been obtained—been able to give to the public without reference to the former one, or borrowing from the former one, a new or 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 neighbour's book, for he must be contented to rest upon his own skill and labour 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.

Neilson v. Harford. Hot blast.

In the case of *Neilson* v. *Harford*, the patent was for heating the air in a close vessel, in its passage between the blowing apparatus and the blast furnace, whereby the heat of the blast is greatly increased. It was held, that since the spirit or substance of the invention consisted in heating the air in the manner just described, any change merely in the form of the vessel would be an infringement, although

the change might *very greatly increase the utility of the invention.* It would still be a use of the spirit or substance of the plaintiff's right. Mr. Baron Parke, in his address to the jury, said: "Though unquestionably what the defendants have done is a great improvement upon what would be the species of machinery or apparatus constructed under his (the plaintiff's) patent, it appears to me it would be an infringement of it" (Webs. Cases, 310).

An increase in the utility of the invention, is within the patent.

In the course of the argument on the motion for a new trial in the above case of *Neilson* v. *Harford*, Mr. Baron Alderson observed:—"The blowing apparatus was perfectly well known, the heating of air was perfectly well known as applicable to blast furnaces; then what he really discovered is, that it would be better for you to apply air heated up to a red heat, or nearly so, instead of cold air, as you have hitherto done. That is the principle—that is the real discovery; but in order to take out a patent you must have an embodiment of the principle, and his embodiment of the principle is the heating of air in a separate vessel, intermediately between the blowing apparatus and the point where it enters the furnace. Then he says, "I do not mean to claim any shape in which it is done; it may be done in a vessel of any shape, provided only you have such a vessel of such a shape, and fire so applied as

that, in the intermediate spaces between the blowing apparatus and the furnace the air arrives at the red heat" (Webs. Cases, 337). And as to the embodiment, or *modus operandi*, his Lordship observed, "It will come very close upon *Boulton and Watt* v. *Bull* (Davis' Cases, 162), the only *modus operandi* of which was the condensing in a separate vessel; so here it is the application of heated air, the air being heated in an intermediate separate vessel. This is a *modus operandi* sufficient to save the patent" (Webs. Cases, 336). And the same learned judge continued—"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 Watts' patent, which comes nearest to the present of any you can suggest, the real invention of which 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 furnace to the separate vessel, and keeping it as cool as possible, whereas the steam before was coudensed in the same vessel; but then Mr. Watt carried that practically into

Boulton and Watt v. *Bull.*

effect, by describing a mode which would effect the object. The difficulty which presses upon 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." The following remarks were made by Sir F. Pollock, counsel for the defendants: "With respect to what has fallen from your lordships, about taking out a patent for a principle, it is theoretically true, but practically it is not true. Practically, you can have a patent for a principle; that is, if you embody your principle in any clear, definite, and distinct form, no other person shall be allowed to take that principle and embody it in some other form merely copied from yours. [Alderson, B.—But then you must perform the previous conditions, and embody it in some practical form.] Yes, you must develop your principle, and you must correctly develop it, and you must put it in some shape, and when you put it in that shape, no person can be allowed to come and steal the spirit of the invention, and put it into some other shape, different from yours, provided the jury think that the other shape is an imitation of your shape" (Webs. Cases, 343). And Sir F. Pollock expressed himself to the like effect in the case of

Neilson v. Harford Hot-blast.

Jupe v. Pratt.
No patent for a principle, but for the spirit of the invention.

Jupe v. *Pratt* (Webs. Cases, 145). "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 a 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."

Precisely the same view of the right to a patent for an applied principle, or for the spirit or substance of an invention, and not merely for the particular form or mode of the application, was very ably pressed upon the jury by Lord Justice Clerk Hope, in an action brought by Mr. Neilson, the patentee of the hot-blast patent, in the Court of Sessions in Scotland, against the Houschill Coal and Iron Company for infringements of his patent (Webs. Cases, 683—85): "It is quite true that a patent cannot be taken out solely for an abstract philosophical principle—for instance, for any law of nature, or any property of matter, apart from any mode of turning it to account in the practical operation of manufactures, 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 promulgation 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 purpose 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

Neilson v. Harford. Lord Justice Clerk Hope's charge to the jury, in the Court of Sessions in Scotland.

Neilson v. Harford.

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 of science, or 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 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.

The application of a well-known principle for the first time patentable.

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 dis-

covering 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 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 life. 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 the 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 much 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 specific 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 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 general claim, that is, for all modes of applying the princi-

Neilson v. Harford.

No objection that the particular application includes every other mode of applying the principle to the specific result.

Neilson v. Harford.

ple 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 application may be very generally adopted in a great variety of ways is the merit of the invention, not a legal objection to the patent.

That it may be adopted in a variety of ways only shows the comprehensiveness of the invention.

"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 throw it hot into the furnace. But you tell us no more; you do not tell us how you are to heat it. You say, you may heat it 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, you may take your patent for the mode of carrying it into effect, and 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

Neilson v. Harford.

Not confined to one form of apparatus.

Nelson v. Harford.

of all 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 various kinds of apparatus could be tried. Hence you may generally claim the mode of carrying its principle into effect by mechanical contrivance, so that any sort of apparatus applied, in the ways stated, will, more or less, produce the benefit, and you are not tied down to any form." This part of the learned judge's summing up was not objected to, on the subsequent appeal to the House of Lords.

Examples illustrating the Proposition, that an Invention loses its claim to novelty by a use in public (the word public not being equivalent to general, but distinguished from secret use); or by a description in a specification or book, if either the use or the description be prior to the sealing of the letters patent, and provided that whatever is alleged to be published was a perfected Invention, and not simply a trial or experiment.

It has been laid down very strongly by Lord Abinger (*Carpenter* v. *Smith*, Webs. Cases, 534), that the use which amounts to the publication of an invention—such a use as destroys

Carpenter v. *Smith.*
A lock on a gate for 16 years is a use in public.

any subsequent claim to its novelty—is a use in public; the article or subject-matter need not be generally adopted by the public. Public is not equivalent to general, but distinguished from secret use. His Lordship's words to the jury were: "The plaintiff's counsel has referred to the words of the statute, to show the words '*public use and exercise*' formed a part of the patent, from which he desires you to take the definition of what he calls the legal meaning of the word 'new;' and he draws this inference—that, unless it has been in public use and in public exercise before, it is new. I repeat the words, that there may be no mistake. The inference he draws from it, (for I took his words down at the time,) is this—that unless it was in public use before, and there was a public exercise of it before, (that is, exercised by the public before,) it is new. Now, I differ altogether from the learned counsel in that respect; and I think what is meant by 'public use and exercise,' as has been held by my predecessors before, (and I think one's own common sense leads one to adopt that definition,) is this:—a man is entitled to a patent for a new invention, and if his invention is new and useful, he shall not be prejudiced by any other man having invented that before, and not made use of it; because the mere speculations of ingenious men, which may be fruitful of a great va-

Carpenter v. Smith.

riety of inventions, if they are not brought into actual use, ought not to stand in the way of other men equally ingenious, who may afterwards make the same inventions, and apply them. A great many patents have been taken out, for example, upon suggestions made in a very celebraied work by the Marquis of Worcester, and many patents have been derived from hints and speculations by that ingenious author. But yet, as he never acted on them, as he never brought out any machines whatsoever, those patents are good. So that the meaning of the words 'public use' is this—that a man shall not by his own private invention, which he keeps locked up in his own breast, or in his own desk, and never communicates it, take away the right that another man has to a patent for the same invention. Now, 'public use' means this—that the use of it shall not be secret, but public; and in that sense I must say, that if you think the lock used by Mr. Davies is a lock which combines the same thing, (I do not say whether it does or not, that is left entirely for your consideration,) I think that is a public use of it, and is within the meaning of this clause of the patent, 'public use and exercise' as used in opposition to private use and secret use. Therefore, if a man invents a thing for his own use, whether he sells it or not—if he invents a lock and puts it on his gate, and

Public use distinguished from secret use.

has used it for a dozen years—that is a public use of it. If it were otherwise, see what the consequence would be:—Mr. Davies has a lock, which he has directed to be made (we may suppose that to be the case) and put on his gate some twenty years ago—sixteen years ago at least; if that was not a public use of it, which prevented a man from taking out a patent, any man might go and take a model of that lock, and get a patent for it. How can he be the inventor of it?—because, to obtain a patent, a man must be the inventor; and if it has been once in public use, (that is, used in a public manner, not used by the public,) yet if it has been used by half-a-dozen individuals, or one, in a public manner, any man having access to it, how can he be said to be the inventor, if by merely gaining access to that he takes out a patent? . . . . . A man cannot be said to be the inventor of that which he might have had access to if he thought fit." On a motion for a new trial, which was refused, Alderson, B., said: "I have not the least doubt that that is the right construction of the law, which my Lord has put upon it. Public use means a use in public, so as to come to the knowledge of others than the inventor, as contradistinguished from the use of it by himself in his chamber. How, then, can it be contended that the lock which

Carpenter v. Smith.

Use in public is use in a public manner, not necessarily used by the public.

Carpenter v. Smith.

has been used in public by Mr. Davies for so many years is a new invention?" And Lord Abinger said: "I was counsel in the cases of *Lewis* v. *Marling*, and *Jones* v. *Pearce*, and I recollect that those cases proceeded on the ground of the former machines being, in truth, mere experiments, which altogether failed. The public use and exercise of an invention, means a use and exercise in public, not by the public. . . . . I have always entertained the same opinion on the subject."

Jones v. Pearce.

Wheels with suspending rods instead of spokes.

In the case of *Jones* v. *Pearce* (Webs. Cases, 123), the patent was for improving the construction of wheels for carriages, by suspending the weight of the carriage, by iron rods, from that part of the wheel which happened to be uppermost. The rods were used instead of spokes. The defendant contended the invention was not new; but had been invented by Mr. Strutt, and publicly used near Derby for two years. Witnesses for the defendant stated, that they had made in 1814, for Mr. Strutt, a pair of wheels, of which the model put in was a rough model; that the wheels had been put to a cart, and used for carrying heavy loads of stones (30 cwt.) on the public roads for upwards of a year. The spokes occasionally got bent, and the box, or nave, becoming broken, the cart was laid by. A pair of those wheels, three feet

high, were used to carry the milk (of from thirty to forty cows) from one of Mr. Strutt's farms to his factory, where the milk was sold. The wheels of this cart were on the suspension principle, and the spokes were braced together like the strings of a drum. The rods of the cart-wheels were thicker at the heads, where they were put in through the outer edge of the wooden fellie, and counter-sunk into iron plates in the fellie. Over the fellie was the iron rim or tire. The spokes or rods were frequently straightened, and the wheel was worked until the iron tire was wore thin on the edges. Mr. Justice Patteson, having summed up the evidence to the jury, said: "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 has taken out his patent, and that was used openly in public, *so that anybody 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

Jones v. Pearce.

If used so that anybody might see it, the novelty is lost.

Jones v. *Pearce.*

But not if an abandoned experiment.

ceased to use it altogether, and abandoned it as useless, and nobody 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 he has or not infringed the patent."

Cornish v. *Keene.*

Patent for the manufacture of elastic goods or fabrics.

The directions by Tindal, C. J., to the jury, in the case of *Cornish* v. *Keane* (Webs. Cases, 508), are to the same effect:—"If this No. 3, (a fabric combined of cotton and threads of India rubber,) calling it technically and compendiously by that title, was at the time these letters patent were granted in any degree of general use; if it was known to all the world and practised openly, so that any other person might have the means of acquiring the knowledge of it, as well as this person who obtained the patent, then the letters patent are void: on the other hand, if it were not known, and were at the time in England, then, as far as this question is concerned, the letters patent will stand."

On the refusal of a motion for a new trial, by the Court of Common Pleas, his Lordship delivered the judgment of the Court, and confirmed this direction. "The question raised for the jury was this: Whether the various instances brought forward by the defendants amounted to proof, that before or at the time of taking out the patent the manufacture was in use in England; or whether it fell short of that point, and proved only that experiments had been made in various quarters, and had been afterwards abandoned? This question is, from its nature, one of considerable delicacy; a slight alteration in the effect of the evidence will establish either the one proposition or the other, and the only proper mode of deciding it is by leaving it to the jury. On the present occasion they heard the evidence patiently, and appeared to apply it with intelligence, and we can see no reason to be dissatisfied with the conclusion at which they arrived" (Webs. Cases, 519).

Cornish v. Keane.

In use, or only experiments, made and abandoned.

And again, in the case of *Gibson* v. *Brand* (Webs. Cases, 628), his Lordship says: "It is quite clear, 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 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 fore-

Gibson v. Brand.

Manufacture of silk with other substances.

Gibson v. *Brand.* Use in private does not affect the novelty of the invention.

seen, or had found out, this discovery that is afterwards made public, or that a man in his private warehouse had, by various experiments, endeavoured to discover it, and failed 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 anybody that thought proper to purchase it* of those who made it; then it becomes a material question, whether such mode of use 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, in *Morgan* v. *Seaward* (2 M. & W. 544), Parke, B., said: "If the patentee himself had, before his patent, constructed machines (made according to the invention) 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 appears to be founded on reason; for if the inventor 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. The whole of the

Morgan v. *Seaward.* But a sale in public will.

Wood v. *Zimmer.*

invention, or thing claimed, must be new, or the patent will be bad."

The novelty of an invention is not only destroyed by being in public existence or use before the date of the patent, it is also lost, if described in a specification or book published or accessible in the realm, prior to the date of the patent. In the case of *Huddart* v. *Grimshaw* (Webs. Cases, 87), Lord Ellenborough, speaking of a patentee's right, said: "If, prior to 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 as 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." And Buller, J., in *Rex* v. *Arkwright* (Davies's Cases, 129, and Webs. Cases, 72): "It is admitted that (No. I.) is not a new discovery; for Emerson's book was produced, which was printed a third time in the year 1773, and that is precisely the same as this." A copy of a foreign work deposited in the British Museum, containing a description of an invention, will destroy its novelty in the realm: the British Museum being a place to which the public can resort for information (*Baron Theurteloup's patent*, Webs. Cases, 553). And the publication of an invention in one part of the United Kingdom, &c., either in England, for instance, in reference to Scotland

A description in a specification or book of an invention amounts to a use in public.

Huddart v. Grimshaw.

Rex v. Arkwright.

Baron Theurtelloup's patent.

Robinson's patent. (*Robinson's patent*, 5 Moore, J. P. C. 65), or the colonies in reference to England, will not only destroy its novelty in Scotland and England respectively, but throughout the empire. In fact, Great Britain and Ireland and all our colonies and plantations abroad are considered as constituting one realm or united kingdom. Publication in any one is publication for the whole (*Roebuck* v. *Stirling*, Webs. Cases, 45, and *Browne* v. *Annandale*, *ib.* 433).

Publication in one part of the United Kingdom is publication for the whole.

Roebuck v. *Stirling.*

Brown v. *Annandale.*

It may be a question how far this view of the law applies to the order, in point of time, in which patents are sealed in England, Scotland, or Ireland respectively. According to the present practice, there must be a considerable interval between sealing a patent in each country, which the patentee cannot help: and since the specification relates back to the sealing, and is a publication in law (though it may be doubted how far an enrolment of a specification is a public use and exercise of the invention), the invention will be published in the three countries and the colonies before it is secured in more than one, and so its novelty, except in that country, rendered questionable (*Cornish* v. *Keene*, Webs. Cases, 519 & 454, n.).

A question how far this applies to sealing English, Scottish, or Irish patents.

Cornish v. *Keene.*

The invention alleged to be already published, must be a perfected invention, and not simply a trial or experiment.

The invention must be perfected, and not a trial or experiment.

"A man may make experiments in his own

closet for the purpose of improving any art or manufacture in public use. If he makes these experiments and never communicates them to the world, and lays them by as forgotten things, another person who has made the same experiments, or has gone a little further, or is satisfied with the experiments, may take out a patent and protect himself in the privilege of the sole making of the article for fourteen years; and it will be no answer to him to say that another person before him made the same experiments, and therefore that he was not the first discoverer of it: because there may be many discoverers starting at the same time, many rivals that may be running on the same road at the same time, and the first which comes to the Crown and takes out a patent, it not being generally known to the public, is the man who has the right to clothe himself with the authority of the patent and enjoy its benefits. That would be an extreme case on one side; but if the evidence that is brought in any case, when properly considered, clothes itself under the description of experiment only, and unsuccessful experiment, that it would be no answer to the validity of the patent. On the other hand, the use of an article may be so general as to be almost universal. In a case like that, you can hardly suppose that any one would incur the expense and trouble of taking out a patent. That would

Cornish v. *Keene.*

He who first comes to the Crown is entitled to the patent.

Cornish v. *Keene.*

The question lies between unsuccessful experiment and universal use.

be a case where all mankind would say, 'You have no right to step in and take that which is in almost universal use; for that is, in fact, to create a monopoly to yourself in this article, without either giving the benefit to the world of the new discovery, or the personal right to the value of the patent to which you would be entitled from your ingenuity and your application.' Therefore it must be between these two (if I may so call it) limits that cases will range themselves in evidence; and it must be for a jury to say whether, supposing those points to be out of the question, in any particular case, evidence which has been brought before them convinces them to their understandings that the subject of the patent was in public use and operation at the time—*at the time when the patent itself was granted by the Crown.* If it was in public use and operation, then the patent is a void patent, and amounts to a monopoly; if it was not, the patent stands good" (*Cornish* v. *Keene*, Webs. Cases, 508).

Galloway v. *Bleaden.*

Whether unsuccessful experiment or complete discovery.

And in the case of *Galloway* v. *Bleaden* (Webs. Cases, 525), the same learned Judge observed: "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: therefore the main point in this case is, whether all that is allowed to have been done by Mr. Field rested in experiment, and unsuccessful experiment not concluded to its full result; or whether it was a complete discovery of that which now forms the subject-matter of the patent." *Galloway v. Bleaden.*

Throughout the preceding cases this principle is kept steadily in view—that the private or secret use of an invention, or trials, or experiments, by one person, do not prevent another from obtaining a patent for the same invention: if he be the *first* to publish the invention, (the first who comes to the Crown,) he is accounted the *first* inventor. This was distinctly laid down in the early case of *Dollond's patent* (Webs. Cases, 431), and has since been invariable followed. Dr. Hall invented the achromatic object-glass for telescopes, but kept it secret; and Dollond's patent for the same invention was held good, he being a true inventor, and the first to apply for a patent. The principle of this decision has been carried out in the recent case of *Crane* v. *Price* (*ante*, 32). The patent was for the use of anthracite or stone-coal with the hot-blast. Neither the use of hot-blast nor of stone-coal was new; indeed, the hot blast was the sub-

The first inventor, is he who first comes to the Crown for the grant.

Dollond's patent.

Crane's patent.

ject-matter of an existing patent. Crane only claimed the merit of combining the two, whereby a cheaper or new description of iron was produced, and his patent was held good. It has been suggested this case goes the length of forbidding those, who used stone-coal before Crane's patent, from continuing to use it—if they, at the same time, used the hot-blast, which was a known and published method, and part of the public stock of information; and that it imports an exception into the hot-blast patent—making stone-coal an exception to the fuel to which it might be applied. But the merit of the hot-blast patent, and the thing claimed, was an increase of the heat in furnaces, not for a method to render serviceable a description of fuel till then almost useless. Crane's patent cannot be said to deprive the public of any rights they had before the grant, any more than Dollond's. The latter only prevented the public, during the patent, from using glass or some such substance of different refrangibility in the manufacture of telescopes, which they had no idea of doing, till the invention was published by an application for letters patent.

Bentley v. Fleming.

The deposit of an invention in a public room, merely to get its qualities tested, is not a publication (*Bentley* v. *Fleming*, 1 C. & K. 587).

Experiments, assisted by others, to test or

perfect an invention, do not necessarily amount to a publication. In the case of *Morgan* v. *Seaward* (Webs. Cases, 193), the facts relating to publications were thus stated by Mr. Baron Parke on delivering the decision of the Court, that judgment should be entered for the plaintiffs:—"The evidence was, that before the date of the patent (which was the 22nd 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 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 2nd of March,

Morgan v. *Seaward.* Experiments assisted by others do not amount to a publication.

Morgan v. Seaward.

and afterwards solicited the patent in question, which was granted to Galloway, and assigned to Morgan." His Lordship then continued, "The wheels were constructed under the direction of the inventor, by an engineer and his servants, with an injunction to secrecy, on the express grounds 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 while in progress. The operation was disclosed, indeed, to the plaintiff Morgan, but there is sufficient evidence that Morgan, at the time, was connected with the inventor, and designed 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. . . . . 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 (see also Webs. Cases, 87); 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 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 the 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 this machine, nor that Morgan himself is; and in which the pecuniary payment may be re-

Morgan v. Seaward.

If they do not amount to a sale in public.

Morgan v. Seaward.

ferred, merely to an ordinary compensation for the labour 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 labour, 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."

And the money paid is only a remuneration for the labour employed.

Carpenter v. Smith.

And in the case of *Carpenter* v. *Smith* (Webs. Cases, 536), which was a patent for a lock, Lord Abinger, in the course of his summing up to the jury said, "The evidence is this,—that a trader (Mr. Freer) living in Birmingham, who is very much connected with the American trade, produced to Mr. Tilsey a model of a lock, and desired Mr. Tilsey who was a factor, and also a manufacturer of hardware goods, to make him, first, six dozen of the locks; and, at another time, a dozen and a half; and Mr. Tilsey employed Walker to do it, and gave Walker the model. This was twenty-six years ago, I think, and six dozen of the locks were made at one time, and a dozen and a half at another time; and this gentleman, Mr. Freer, who traded with America, paid Walker for them. Here you have

an article manufactured by an English manufacturer, and sold; and, in my opinion, if it were sold even for the assumed purpose (of which there is no legal evidence) of being sent to America, I cannot but think that that would be a destruction of the novelty of the plaintiff's invention. And here let me be clearly understood: I do not mean to say, if a man in America employs an agent to see if he can get an article manufactured in England by a particular model, and chooses to take out a patent for it himself, but not with the view of making it public at all: I do not mean to say that a man is to be considered as not entitled to the invention afterwards, because he employs a workman to assist him in it, or, that if he had failed entirely, that some other man might make the invention in England; but where a model is sent to a workman, who sells seven-and-a-half dozen, and sells them for a certain price, I must say I think the invention was used and publicly exercised. There is no secresy in the manufacture of them; it is not shut up in the closet of the workman who makes them, but the man who makes them gives directions to another man; but he sells them for his own profit; and I think it would be the hardest thing in the world, if the Walkers were now to use that model, and make locks of the same description, if they were to be told to day—'You cannot do that

Carpenter v. Smith.

But if sold for a profit, the novelty is lost.

Carpenter v. Smith. without violating Mr. Carpenter's patent, although you did it twenty-six years ago, and made a profit by your manufacture of it."

Examples illustrating the Proposition, that the fact of the Invention not being in use at the time of taking out the Letters Patent is of no consequence; provided it has been once published, and was then a perfected Invention.

The Household Company v. Neilson. BEFORE the discussion of the case of *The Household Company* v. *Neilson*, which was an appeal from the Court of Sessions in Scotland to the House of Lords, there appears to have been some doubt, at least in Scotland, as to the effect of the subject-matter of a patent being known or not, at the time of taking out the letters patent. In the case of *Jones* v. *Pearce* (Webs. Cases, 124), Mr. Justice Patte-

Jones v. Pearce. son—assuming Mr. Strutt's wheel, which was proved to be in existence fourteen years before the date of the plaintiff's patent, to be a perfected invention, and the same as that patented by the plaintiff—told the jury, that under the circumstances, if they were of opinion Mr. Strutt's wheel "was used openly in public, so that everybody 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 was not new." And again, in the case of *Cornish* v. *Keene* (Webs. Cases, 509), the Chief Justice of the Common Pleas told the jury, that the question for them was, whether the "evidence which has been brought before them convinces them, to their understanding, that the subject of the patent was *in public use and operation at the time—at the time when the patent itself was granted by the Crown?* If it was in public use and operation, then the patent is a void patent, and amounts to a monopoly; if it was not, the patent stands good." The words of the statute are, "any manner of new manufactures, ... which others at the time of making such Letters Patents and grants shall not use.

Cornish v. *Keene.*

It is supposed, that on the authority of these cases, the Lord Chief Justice Clerk Hope told the jury, in the case of *Neilson* v. *The Househill Company*, on its trial in Scotland, that prior use to vitiate the patent "must have continued to the time when the patent was granted; I don't say to the very exact period, but it must have been known and used as a useful thing at the time" (Webs. Cases, 691). But Lord Lyndhurst, on delivering the judgment of the House of Lords, on the appeal from this ruling, stated such was not the law. "If it is discontinued,"—speaking of an invention,—"provided it has been once in public

The Household Company v. *Neilson.*

The Household Company v. Neilson.

use, and the recollection of it has not been altogether lost; if it has been once publicly used, it will be sufficient to invalidate the Letters Patent; although the use may be discontinued at the time when the Letters Patent were granted. I apprehend this is the law and the known law upon the subject, in this country. I never heard it before questioned, that the notorious public use of the invention before the granting of the Letters Patent, though it may have been discontinued, is sufficient to invalidate the Letters Patent" (*The Household Company* v. *Neilson*, Webs. Cases, 710). And Lord Campbell to the like effect: "The learned Judges in Scotland seem to me, with great deference, to have been misled by the expressions that are ascribed to Mr. Justice Patteson, and Lord Chief Justice Tindal. But what Mr. Justice Patteson may have said in that case, and what Lord Chief Justice Tindal may have said in another case, taken in conjunction with the whole of their direction, amounts to this—that the abandonment may be material for the assistance of the jury, to consider whether it be a perfect invention or not; but assuming it to be a perfect invention, the abandonment becomes wholly immaterial. The learned Judges, therefore, in Scotland, in assuming that the direction of the learned Judges in England to the jury in a point of fact, was laid down by the learned Judges in England as a

point of law, were certainly mistaken (Webs. Cases, 716). *The Household Company v. Neilson.*

Yet it appears the law is still unsettled, as to whether, if a perfected invention were abandoned, and then subsequently patented by another party after a long period, the patent would be good." The Lord Chancellor carefully excepted this case from their Lordships' decision in *The Household Company v. Neilson.* "It must not be understood, that your Lordships, in the judgment you are about to pronounce, have given any decision on 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 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 be 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." Lord Brougham: "It becomes like a new discovery (Webs. Cases, 717).

Supposing an invention has been used a year or two, and then for ten years out of use, any one taking it up again will not be the first inventor (Lord Lyndhurst, Webs. Cases, 720, note). In the case of the longer

The Household Company v. Neilson.

period of fifty years, Lord Brougham said: "It would be considered a new invention." Between such a case and the instance of use within ten years the law may perhaps have drawn the line.

Examples illustrating the Proposition, that it is not necessary to bring the knowledge of prior publication of an invention home to a subsequent Patentee in order to invalidate the Patent.

TILL a late case, some doubt existed as to the necessity of bringing home to the patentee, the publication of an invention, before his grant could be considered as voidable for want of novelty. There had been several hints, to the effect that, what had been so published, becoming part of the stock of public information, the knowledge of the patentee might be presumed (see *Carpenter* v. *Smith*, 9 Mees. & Wels. 302, and *The Household Company* v. *Neilson*, Webs. Cases, 712). The question was set at rest by the following judgment of Tindal, C. J., in *Stead* v. *Williams* (C. B. Rep. 842), on granting a new trial:—"It appeared, before the granting of the letters patent to the plaintiff, there had been published in a scientific work in England a letter from a gentleman of the name of Heard, containing such a description of a mode of paving with

Stead v. Williams.

Wood paving.

blocks of wood as made it fit to be submitted to the consideration of the jury, as not differing substantially from the invention for which the patent was granted." Mr. Justice Cresswell, who presided at the trial, put it to the jury, that "if the letter had been so far communicated to the public as to have become a part of the public stock of information, and he had thus obtained his knowledge indirectly from the publication, that he was not to be considered as the first inventor within the meaning of the statute." But the Court of Common Pleas thought—"If the invention has been already made public by any description contained in a work, whether written or printed, which has been publicly circulated, in such case the patentee is not the first and true inventor within the meaning of the statute, *whether he has himself borrowed his invention from such publication or not*; because we think the public cannot be precluded from the right of using, such information as they were already possessed of at the time the patent was granted. The application of this principle must depend upon the particular circumstances which are brought to bear upon each particular case. The existence of a single copy of the work, though printed, if brought from a depository where it has long been kept in a state of obscurity, would afford a very different inference from the production of an encyclopædia, or

Stead v. Williams.

Stead v. Williams.

other work in general circulation. The question will be, whether, upon the whole evidence, there has been such a publication as to make the description a part of the public stock of information."

The principle of this decision is also applicable to the prior use of an invention, and to a specification; with the additional presumption as to the notoriety of a specification, arising from its being a public record, and therefore supposed to be generally known.

Example illustrating the Proposition, that the true Inventor is he who suggests the spirit or substance of the invention.

Minter v. Wells.

In the case of *Minter* v. *Wells* the patent was for "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." On the trial, it was shown, that the patentee had been assisted by a workman named Sutton, and the jury were told that—"If Sutton suggested the principle to Mr. Minter 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. You will judge which is the most probable of the two" (Alderson, B., *Minter* v. *Wells*, Webs. Cases, 132). *Minter* v. *Wells.*

Examples illustrating the Proposition, that the claim to be a true Inventor is not injured by obtaining the assistance of workmen and scientific men to perfect the details, or to extend the useful application of the main or leading idea of the Invention.

On the trial of *Minter* v. *Wells* (Webs. Cases, 133), it was shown, that the patentee employed Sutton to assist him in perfecting a recumbent chair, with a self-adjusting leverage at the back. Sutton ordered certain iron plates to be made by a smith, who being called, as appears in the Judge's summing up, said, "he made a dozen plates in November; he cannot say the day precisely; it was after the date of the patent. Mr. Sutton resided in Dean Street in September; he had employed me before. I think Mr. Minter's name was on the door." And although there was no direct evidence, the learned Judge suggested to the jury it was not at all improbable Sutton was the plaintiff's servant, and that "he might be assisting him to carry into effect this invention. Mr. Minter wanted an adroit hand *Minter* v. *Wells.*

Minter v. Wells.

to carry into effect the conceptions of his own original head. Then the baker, Charles Willson, says, 'that, some time in 1830, Sutton showed him, in the back shop, a chair, which was very like this chair, and upon which he was working at the time; it acted by balances, and the action was according to the weight. There was a person called Minter.' The probability is that that was the plaintiff. 'He used to come with Sutton on a Sunday into the back shop;' at the time, of course, the workmen would be away and he would be left alone. If Mr. Minter was the person making the invention, and was probably consulting with Sutton for the purpose of getting this conception carried into effect, is it not probable he would come at those times when there was no other workmen about, that the invention might not get out to the trade, and some one precede him in claiming the patent, that the idea might not creep out? Because it very often, at least not unfrequently, occurs that some workman turns traitor, gives out the conception, which is the original or true invention; some other adroit workman carries on his proceedings in a more rapid way, and procures a patent before the person who made the first conception." Again, in

Jupe v. Pratt.

Jupe v. *Pratt* (Webs. Cases, 148, n.), (the invention was a table, to be expanded by diverging from a common centre) a witness said: "I

am a machinist, and was applied to by the plaintiff to make a model of a table for him. He brought me a pattern made in cardboard. There was no machinery underneath in this, the first model, to make the parts diverge. Plaintiff's application to me was to adapt some machine to make the sections move simultaneously. His model only drew out by hand. He did not give me any model of machinery, but only a card divided into four pieces, and desired me to construct some machine to effect that mechanically instead of by hand. The principle of expansion is the same in plaintiff's and defendant's table; looking at the plans of the table, it is the same exactly. In both tables the pieces radiate from one common centre. I suggested the mode of making them move simultaneously. The table is quite perfect without the machinery." In both these cases the jury found for the plaintiff. In *Jupe* v. *Pratt* a new trial was granted on payment of costs; one of the three grounds being that the specification embraced the mechanical contrivance, which was not entirely the plaintiff's. But no further proceedings were taken. *Jupe v. Pratt.*

It has been laid down in general terms, that a master is entitled not merely to the manual labour of his servant, but also to his ingenuity, exercised in his master's em-

Makepiece v. *Jackson.*

ployment. The discharged servant of a calico-spinner wished to take away with him the book containing the processes for mixing colours, some of which he invented. On the master's refusal, the servant brought an action to recover the book, and the jury found a verdict for the defendant. "It is clear, from the evidence, that the book was the property of the master; and though there might be inventions of the plaintiff in it, yet they were the property of the master" (Heath, J.), "The master has a right to something besides the mere manual labour of the servant in the mixing of the colours; and though the plaintiff invents them, yet they are to be used for his master's benefit, and he cannot carry on his trade without his book" (Chambre, J., *Makepeace* v. *Jackson*, 4 Taunt. R. 771).

Master entitled to servant's ingenuity.

The assistance of a workman, in the trials and experiments required to complete an invention, is similar to the service the defendant was entitled to in the above case. He has therefore no distinct claim upon his employer, for suggestions made in the course of his duty and ordinary employment, and which should be considered as part of the original invention. A scientific man, as a civil engineer, may be employed to perfect the mechanical details of an invention without injury to the inventor's claim to originality. This was well illustrated

by the services Mr. Donkin rendered to the patentee of certain machinery, for making an indefinite length of paper. He supplied the mechanical details for receiving the pulp on an endless wire web, passing round cylinders and revolving with the same uniform velocity, without injury to the originality of the patented invention (*Bloxam* v. *Elsee*, 1 C. & P. 558, and Webs. Cases, 132, note). *Bloxam* v. *Elsee.*

In *Allan* v. *Rawson* (C. B. Rep. 551), Creswell, J., said: "The improvement claimed by Shaw was something clearly and palpably subordinate to the invention of the patentee. The object was to obtain a bat of an even and sufficient thickness, and of sufficient length to be felted into cloth fit for commercial purposes. The patentee had obtained a bat sufficiently even and of sufficient substance, and he ascertained that, by extending the compound apron, he could obtain the required length. The suggestion of Shaw was of a mere mode of using the extended apron in a more compact and convenient form," and did not affect the patentee's right as a true inventor. *Allan* v. *Rawson.*

Examples illustrating the Proposition, that if the Invention is alleged to be a Copy, some probable knowledge, at least, of the perfected Invention, or of the description of such an invention (and not merely of an abandoned experiment or hint,) from which it is said to be taken, should be brought home to the patentee; or his claim as a true or bonâ fide inventor will not be affected.

Lewis v. Marling. As to the imitation from a known machine, Lord Tenterden, C. J., observes: "If it were shown that the plaintiffs had borrowed from some one else, then of course their. patent would fail." And again, in the same case, on a motion for a new trial, "I told the jury, that if it could be shown that the plaintiffs had seen the model or specification, that might answer the claim of invention." And Bayley, J.: "It is said that communications were made from America; *if it had been shown that the plaintiff had seen the model, and had borrowed from it, he would not have been the true inventor*, and would therefore have misled the Crown; but if I make a discovery, and am enabled to produce an effect from my own experiments, judgment, and skill, it is no objection that some one else has made a similar discovery by his mind, unless it has become public. So if I introduce a discovery, *bonâ fide* made, I may have a patent for it, though a person might have received privately a communication from

abroad, which would have enabled him to have made the machine" (*Lewis* v. *Marling*, Webs. Cases, 496). In *Hill* v. *Thompson*, Dallas, J., referring to the difference between novelty and discovery, said: "I mean to distinguish between these terms; for it is not enough to have discovered what was unknown to others before, if the discovery be confined to the knowledge of the party having made it; but it must have been communicated more or less, or it must have been more or less made use of, so as to constitute discovery, as applied to subjects of this sort. The case of Dollond has been mentioned at the bar, as also Tennant's patent for bleaching liquor, and they stand so contrasted as to illustrate the distinction to which I allude. In *Dolland's case*, the question was, who was the true inventor within the meaning of the statute. Hall had made the discovery in his closet, but had never made it public; and on this ground Dollond's patent was confirmed. In *Tennant's case*, the great utility of the invention was proved, and the general ignorance of the bleachers of it till after the date of the patent. But, on the other side, a bleacher near Nottingham deposed, that he had used the same means of preparing his bleaching liquor for six years anterior to the date of the patent; but that he had kept his method a secret from all but his own partners, and the two servants concerned in

Hill v. *Thompson.*

Difference between novelty and discovery.

Dollond's patent.

Tennant's patent.

Tennant's patent.

preparing it. In addition to this, different conversations were proved to have passed between Tennant and a chemist of Glasgow, before the patent; and in *these conversations the chemist had suggested to Tennant the basis of the improvement in question.* Under these circumstances Tennant was deemed not be the inventor,

Arkwright's patent.

and a nonsuit was granted. Again, in Arkwright's patent for spinning machinery, evidence was given at the trial respecting a particular roller, part of the machinery, to the effect that Arkwright had been instructed as to the utility of this roller 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 claimed the rollers as his invention, and made it the foundation of a patent, which was held to be bad. The same fact was proved as to a crank, which had been discovered by a person of the name of Hargreave, which also had been adopted by Arkwright" (Webs. Cases, 244).

Cornish v. *Keene.*

In *Cornish* v. *Keene* (Webs. Cases, 507), Tindal, C. J., told the jury: "There is nothing to deprive Mr. Sievier of the merits of being the inventor of this improved manufacture; there is no particular evidence that points to him as having borrowed it from anybody else, or from public sources to which the public has right of access. . . . . If anybody is able to show that the party who got

the patent was not the man whose ingenuity first discovered it; that he had borrowed it from A. or B., or taken it from a book that was printed in England, and which was open to all the world; then, although the public had the benefit of it, it would become an important question whether he was the first and original inventor of it." And the substance of this quotation is concisely put by his Lordship in the case of *Gibson* v. *Brand* (Webs. Cases, 628): "A man may publish to the world that which is perfectly new in all its uses and has not before been enjoyed, and yet he may not be the first and true inventor; he may have borrowed it from some other person; he may have taken it from a book; he may have learnt it from a specification; and then the Legislature never intended, that a person who had taken all his knowledge from the act of another, from the labours and assiduity or ingenuity of another, should be the man who was to receive the benefit of another's skill."

Cornish v. *Keene.*

Gibson v. *Brand.*

An inventor may take advantage of a hint, or an abandoned and imperfect experiment or trial, without injuring his title to originality. This is supported by Lord Abinger's opinion in *Carpenter* v. *Smith* (Webs. Cases, 534), when alluding to the many good patents founded upon suggestions, contained in the celebrated work of the Marquis of Worcester. And, in the case of *Galloway* v. *Bleaden*, Tindal, C. J., referring

Galloway v. *Bleaden.*

Galloway v. *Bleaden.*

to certain experiments which were alleged to constitute a perfected invention, identical with the plaintiff's, told the jury, "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 were experiments 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" (Webs. Cases, 529).

Abandoned experiments may be used by the person who ultimately brings the invention to perfection.

Power of Privy Council to grant new Letters Patent.

5 & 6 Will. 4, c. 83, s. 2.

By the 5 & 6 Will. IV. c. 83, sect. 2, it is provided, "That if in any suit or action it shall be proved, or specially found by the verdict of a jury, that any person who shall have obtained Letters Patent for any invention, or supposed invention, was not the first inventor thereof, or of some part thereof, by reason of

some other person or persons having invented or used the same, or some part thereof, before the date of such Letters Patent, or if such patentee, or his assigns, shall discover that some other person had, unknown to such patentee, invented or used the same, or some part thereof, before the date of such Letters Patent, it shall and may be lawful for such patentee, or his assigns, to petition her Majesty in Council, to confirm the said Letters Patent, or to grant new Letters Patent; the matter of which petition shall be heard before the Judicial Committee of the Privy Council. And such Committee upon examining the said matter, and being satisfied that such patentee believed himself to be the first and original inventor, and being satisfied that such invention, or part thereof, had not been publicly and generally used before the date of such Letters Patent, may report to her Majesty their opinion that the prayer of such petition ought to be complied with; whereupon her Majesty may, if she think fit, grant such prayer: and the said Letters Patent shall be available in law and equity to give to such petitioner the sole right of using, making and vending such invention, as against all persons whatsoever, any law, usage, or custom to the contrary notwithstanding: provided that any person opposing such petition shall be entitled to be heard before the said Judicial Committee: provided

5 & 6 Will. 4, c. 83, s. 2.

5 & 6 Will. 4, c. 83, s. 2. also, that any person, party to any former suit or action touching such first Letters Patent, shall be entitled to have notice of such petition before presenting the same."

The remedy offered by this enactment has been sought on very few occasions, as no doubt it was only intended to relieve extreme and exceptional cases.

CHAPTER II.

ON THE SPECIFICATION OR SUFFICIENT DESCRIPTION OF A PATENTED INVENTION.

THE short description of the invention, contained in the petition to the Crown, which is subsequently recited in the letters patent, or the title of the invention, as it is called, may give some idea of the subject-matter of the patent, though very vaguely; but it is from the specification or the inventor's description of the nature and object of his invention, and of the manner in which the same is to be employed, that it must be fully ascertained.

The specification is the only source from which the nature and object of the invention can be ascertained.

A good or sufficient specification is therefore the documentary evidence required to define, and circumscribe any invention protected by letters patent, and to render it cognizable, and practicable from time to time. It is only from the words and phrases used, and the grammatical and legal construction of the whole document, that the identity or individuality of the invention can be made apparent, and its full scope, its full spirit, or substance can be secured, and the propositions enunciated in the preceding chapter applied.

A patentee is therefore required, as the chief

It must be enrolled in the Court of Chancery.

condition of a grant of letters patent, to enrol a specification, or sufficient description of his invention, in the Court of Chancery within a given time. The grant or letters patent, and the specification are thenceforth considered to be one record, and are read together, so that the conditions of the grant, and their performance, may always be found side by side. If this enrolment be omitted, the grant fails altogether.

The specification then is a statement by the inventor at his own risk of whatsoever he claims the exclusive use, and it must not only satisfy the express condition of the grant, respecting its sufficiency, but also keep closely to the original title of the invention. This

The condition in the letters patent.

condition is as follows, "if the said (patentee) shall not particularly describe and ascertain *the nature of his said invention, and in what manner the same is to be performed* by an instrument in writing under his hand and seal, and cause the same to be enrolled in our High Court of Chancery, within six calendar months next, and immediately after the date of these our letters patent; then the letters patent, and all liberties and advantages whatsoever hereby granted shall utterly cease, determine and become void."

The invention may be a good subject-matter for a patent,

So that an invention, may be a good subject-matter for a grant of letters patent, and yet fail to obtain the protection of the law

from a wrong or insufficient description. The invention may be sufficiently useful and entirely new, and patented by the right party, and at the proper time, and yet the exclusive right to letters patent be lost by the patentee, because he has not clearly and effectively shown the nature of his invention, and the manner in which it is to be used, or because he has neglected to keep to the title of his *said invention*, that is, to that particular subject-matter mentioned in his petition; whereby the Crown is said to have been deceived, and the letters patent are therefore voidable. His specification is the only source from which the public can learn the character and extent of his invention, and to which alone he can refer when desirous to enforce his rights under the letters patent. On this account, a very large proportion of the litigation respecting patent rights, consists in disputes as to the meaning of this most important document, which ought not to be, as many suppose, a simple statement of the invention, according to the inventor's notions of the sufficiency, propriety, and clearness of the particular words and phrases used, for it will be construed by a Court of law, as technically as a deed or a will, and with a similar reference to the decisions containing the rules and tests of interpretation and sufficiency.

and yet be unprotected in consequence of a bad specification.

The construction of a specification (the

The construction of the specification is for the court.

meaning of any terms of art or science having been ascertained by evidence) is entirely for the judge as in all other documentary evidence, and he is bound to decide on its sufficiency in accordance with the cases already determined on the subject as much as if it were a written instrument of the most exclusively legal character. In *Neilson* v. *Harford* (Webs. Cases, 370), Parke, B., on delivering judgment, said, "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, 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."

The division of the subject of this chapter.

The subject of a good specification, or a sufficient description of a patented invention, may be conveniently considered in the following order:—

From the words of the condition in letters patent, it appears a specification should, 1st, *describe and ascertain the nature of his said invention*; and 2ndly, *describe and ascertain in what manner the same is to be performed.*

The first division.

I. In describing the nature of the invention, the specification may be assisted by drawings.

The nature of the invention.

The patentee must point out accurately and fully of what particulars the invention consists, its identity or individuality,—what he really claims.—He must show where the old or used part of the subject ends, and the new part, that is, his invention, begins.—He will not be taken to claim anything well known or commonly used at the time of the grant of the letters patent;—and the then state of knowledge on the subject of his invention will be also kept in view in the construction of his specification. A patentee should state distinctly whether his claim is for the mere form or particular arrangement of the parts, or for the method of his invention, as for a principle or general idea usefully applied—that is, for the spirit or substance of some particular arrangement or method.

The second division.

The manner in which it is to be performed.

II. In describing in what manner the invention is to be performed, the object to be obtained is, that the public, at the expiration of the letters patent, may be fully informed and instructed by the specification as to the best method of using the particular invention. This is the essential character of the second clause of the condition. These instructions need not be intelligible to every one; they will be sufficient if understood by workmen or other persons employed in the particular trade in question:—but they must be workmen and not scientific men, and be able to practise or use the invention from the directions in the specification alone, without assistance from another person.—The specification must therefore omit nothing at all necessary, or need experiments to render it applicable to some useful purposes:—but experiments may be required to get the greatest benefit from the invention, without affecting the sufficiency of the specification.

The patentee must state one or more ways or methods of carrying his invention into effect.—The specification must contain no words or phrases likely to mislead.—Every method recommended by the patentee should have been previously tested, and the most usual and common names given to the means or things used in carrying out the invention; and he must give the public the full benefit of

his information on the particular subject, up to the time of enrolling his specification.

III. Beyond the satisfaction of this condition, a patentee must be careful to describe and claim in his specification that particular invention for which he petitioned, or the letters patent are voidable, from an alleged imposition or deception said to be practised on the Crown. The letters patent (which always recite the petition containing the title, or short description of the invention,) and the specification are read together as one document, which must be consistent with itself. The invention described must be that for which exclusive privileges were asked, and no other.

The third division.

The title and specification must agree.

IV. The consideration is entire, and, if wanting in any essential element, the letters patent fail altogether. These elements are, that the invention was patentable, that the specification is sufficient, and that the title and specification relate to the same subject-matter.

The fourth division.

The consideration is entire.

It has been held that drawings are to be considered as forming part of "the instrument in writing to be enrolled in our High Court of Chancery," and enrolled along with the written description of the invention, and form part of the specification.

Drawings part of specification.

In the case of *Bloxam* v. *Elsee*, the subject-matter of the patent was a foreign invention, and the specification contained such words as "vice," for a screw, and "vice de pression,"

Bloxam v. *Elsee*.

for an adjusting screw; but the drawings rendered the matter clear to a skilful mechanic; and Abbott, C. J., said: "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 drawings, the one will explain the other sufficiently to enable a skilful mechanic to perform the work, such a specification is sufficient" (1 Car. & Pay. 564).

They should merely illustrate.

The drawings should merely illustrate the written description, or the claim will be confined to the particular form represented in the drawings.

Morgan v. *Seaward.*

In *Morgan* v. *Seaward* (Webs. Cases, 178), the point being to ascertain the method of making the float-boards of a paddle-wheel enter and leave the water at any required angle, and not at one particular angle, Alderson, B., told the jury they could not "treat the actual picture which was 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 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. *Morgan* v. *Seaward.*

And it is not indispensable they should be skilfully drawn, as long as, taken with the specification, they render the subject-matter of the patent intelligible to a skilful workman. "A rough plan, drawn by a person who understands the subject, with pen and ink, is better than the most beautiful drawing of a man who does not understand it" (Gibbs, C. J., in *Bovill* v. *Moore*, Davis's Cases, 369). And need not be skilfully drawn. *Bovill* v. *Moore.*

The importance of the specification, distinctly describing the invention claimed, was forcibly and clearly laid down by Lord Eldon, in the early case of *Hill* v. *Thompson* (Webs. Cases, 237): "I 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, The specification must be precise and distinct. *Hill* v. *Thompson.*

Hill v. Thompson.

by his specification, any more than he is strictly entitled to, his patent is thereby rendered ineffective, 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 construction 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 the 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." In the same case, during the proceedings at law, the requisites of a specification as to precision, and the mode of testing its sufficiency, are well illustrated by the following remarks of Dallas, J., on delivering the judgment of the Court of Common Pleas on motion for a new trial. The patent claimed, amongst other things, the use of lime to prevent the state of "cold short" occurring in the manufacture of iron during the processes of puddling and refining. It was proved at the trial that the use of lime for this purpose was

not new at the date of the patent, although the method and proportions stated in Mr. Hill's specification were improvements on that use; and Dallas, J., said, "So far, therefore, the application of lime is in terms claimed as an improvement, and nothing is said as to 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, this: '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 the quality in iron from which the iron is called "cold short," and will render such iron more tough when cold; and for this purpose I do add 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

Hill v. *Thompson.*

Hill v. *Thompson.*

reduction in the blast furnace; and this from 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 prevent brittleness, not qualified or 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" (Webs. Cases, 247).

Minter v. *Mower.*

And a like precision in the specification was required by the Court of Queen's Bench, in the recent case of *Minter* v. *Mower* (Webs. Cases, 142). Mr. Minter obtained a patent in 1830, for the application of a self-adjusting leverage to the back and seat of a chair, so that the weight on the seat should counterbalance the pressure against the back of the chair, and a person sitting in such a chair might, by simply pressing against the back, cause it to take any inclination he desired. It appeared in evidence at the trial, that in 1829, before Minter's patent was obtained, a chair was made by a Mr. Bower's workman, upon the principle of a self-adjusting leverage, but that it was so encumbered with bad and needless machinery, as to pre-

vent the self-adjusting leverage from balancing. Both Bower and his workman were ignorant of the principle or real substance of the machine; and the jury gave a special verdict accordingly. On a motion to enter a nonsuit, the Court said, the real question they had to decide was, whether the patentee had in his specification particularly described and ascertained the nature of his invention. Minter claimed the application of a self-adjusting leverage to produce a counterbalance, as just described, and Bower's machine would effect the same object, if it were not encumbered with some additional machinery. The specification, therefore, claimed too much, and would actually preclude Mr. Bower from continuing to make the same chair that he had made before the patentee's discovery; and a nonsuit was entered. But the Court were of opinion, that Minter's claim would have been perfectly good, if it had been distinctly confined to an improvement of Bower's leverage by removing the encumbering and needless machinery, instead of being for the principle or method of self-adjustment, which was previously published by Bower. *Minter* v. *Mower.*

The following older cases are to the like effect:—

In *Saunders* v. *Aston* (3 B. & Ad. 886), "the substitution of a flexible material in the place of metal shanks on buttons, is the invention *Saunders* v. *Aston.*

Saunders v. Aston.

claimed by the patentee. And it appeared, that the only thing which could be at all said to be useful and new, was the collet used by the plaintiff to fix the flexible shank upon the button. On a rule to enter a verdict for the plaintiff, Mr. Baron Parke said, "The specification, after having described the mode of using the collet, concludes by repeating what is also stated in the beginning, that the object is the substitution of a flexible material in place of metal shanks. I thought, at first, we might infer, that the substitution here spoken of meant a substitution by the particular method which has been relied upon, namely, by the toothed collet. If so, the patent might have been good. But it does not appear that that is claimed as a part of the invention; it is admitted that other methods will answer the purpose. I think, therefore, that the plaintiff's claim by this patent cannot be supported."

Rex v. Cutler.

In *Rex* v. *Cutler* (1 Starkie, 354), the patent was for a new mode of feeding the fire in a grate, by supplying the fuel from below instead of from above, in the usual way. The fuel intended to be consumed in the course of the day was placed in a close box beneath the grate, and, as the coals in the grate were gradually consumed, their place was to be supplied by bringing those in the box in contact with the burning coals in the grate, by means

of a rack and pinion. The coals, as long as they remained in the box, out of reach of the burning coals, and not exposed to air from below, were unignited. There was an arrangement, shown by the assistance of the drawings, for introducing the fuel at the lower part of the grate in an oblique direction. Two similar inventions appear to have been used before the patent was obtained. One was produced by Mr. Marriott. It was a grate of considerable length, furnished with a door, and when the door was open it did not differ from an ordinary grate, but when shut, only a few of the highest bars were visible. As the coals in this grate were consumed above the door, the coals in the lower part of the grate were to be raised to supply the consumption, by means of a rack and pinion. It was contended that the principle of this grate was the same as that claimed by the patent; the lower part of the grate, when the door was shut, being in effect a closed chamber, to which the air had no access. It was contended, in reply, that in Mr. Marriott's grate there was no fresh introduction of fuel; there was nothing more than a means of compressing coals already within the grate, which could only be done by decreasing the size of the grate itself. On the other hand, the defendant's box or chamber was independent of the grate, and there were some other slight differ-

Rex v. Cutler.

Rex v. *Cutler.*

ences noticed. The other invention was precisely similar; the only difference being that there were two doors instead of one, one above the other. There was also a ventilator at the lower part of the grate or closed chamber, which might be opened occasionally when required. But Lord Ellenborough was of opinion, that the principle on which the two grates were constructed was identical with that described in the terms of the specification, which was for a mode of supplying fuel from below; and there was nothing predicated in the specification of raising the fuel from below the grate; it was merely for elevating a supply of fuel from below, and that the defendant had confined himself, by thus summing up the extent of his invention, to the benefit of the principle. Verdict for the Crown.

M'Farlane v. *Price.*

What is old and what is new must be clearly shown.

In the case of *M'Farlane* v. *Price* (1 Starkie, 199), the patent was for certain improvements in umbrellas and parasols. The specification gave an account of the ordinary construction of umbrellas and parasols, such as stretching the silk, &c., and also of the alleged improvements, which consisted chiefly in the insertion of the stretchers, which were knobbed at the end, in sockets formed in the whalebone, instead of attaching them to the whalebone in the usual way, by forked ligaments which came in contact with the silk. By this contrivance the stretcher did not wear

the silk in spreading the umbrella or parasol. Throughout the whole specification no distinction was made between what was new and what was old: and Lord Ellenborough said, "The patentee in his specification ought to inform the persons who consult it what is new and what is old. He should say, My improvement consists in this,—describing it by words, if he can, or, if not, by reference to figures. But here the improvement is neither described in words nor by figures, and it would not be in the wit of man, unless he were previously acquainted with the construction of the instrument, to say what was new and what was old. The specification states, that the improved instrument is made in manner following: that is not true, since the description comprises that which is old as well as that which is new. Then it is said the patentee may put in aid the figures; but how can it be collected from the whole of these in what the improvement consists? A person ought to be warned by the specification against the use of the particular invention, but it would exceed the wit of man to discover from what he is warned in a case like this." In the case of *Bramah* v. *Hardcastle* (Holroyd on Patents, 81), the patent was for an improved water-closet, and Lord Kenyon, C. J., said, "The stress of the cause mainly depends upon this, whether the thing granted by the patent be entirely new. The

M'Farlane v. Price.

Bramah v. Hardcastle.

Bramah v. *Hardcastle.*

conducting of the wire through the hollow tube, to prevent the obstruction of the frost, I admit is very ingenious, and perfectly new, but is not claimed by the patent. Unlearned men look at the specification, and suppose everything new that is there. If the whole be not new it is hanging terrors over them." In *Rex* v. *Else* (Webs. Cases, 76) the patent was for intermixing silk and cotton thread upon the same lace frame. This was admitted not to be new; but it was contended that the defendant had first invented the method of intermingling them so as to avoid coarseness, and unite strength with firmness. But Buller, J., said, "It will be to no purpose. The patent claims the exclusive liberty of making lace composed of silk and cotton thread mixed, not of any particular mode of mixing it; and therefore, as it has been clearly proved and admitted that silk and cotton thread were before mixed on the same frame for lace, in some mode or other, the patent is clearly void, and the jury must find for the Crown." But where a specification sufficiently describes an invention which is an improvement upon one previously patented and specified, the second specification need not point out what is claimed under the first (*Harmer* v. *Playne*, Davis's Cases, 311). As to a well-known article, method, or machinery, Lord Ellenborough said, in the case of *Huddart* v. *Grimshaw*, (Webs. Cases, 87,)

Rex v. *Else.*

Harmer v. *Playne.*

A second specification need not point out what is claimed by the first.

speaking of the requisites of a good specification, "And if, in stating the means necessary to the production of that end, he oversteps the right, and appropriates more than is his own, he cannot avail himself of the benefit of it. *I do not mean if he states a bobbin which was in common use before*; but if he states any particular thing before in common use applied in a new manner to the production, and effecting a new end, that is part of the substance of the invention. And if he states that which of itself is not new, but old and known to the world, though it was unnecessary for him to do so, having done so, he has overstepped his right, and has included in his invention that which was not his invention, and in that respect his patent will be void. In the case of *Haworth* v. *Hardcastle* (Webs. Cases, 484), the patent was for "certain machinery or apparatus adapted to facilitate the operation of dying calicoes, muslins, linens, or other similar fabrics." On the part of the defendant, it was contended that the patent was void, because the specification claimed as new the placing the staves or rails over which the calicoes, &c. were to be hung, at the top of the dying-house. But the Court overruled the objection, and Lord Chief Justice Tindal, in delivering their judgment, said, "We think, upon the fair construction of the specification itself, the patentee does

Huddart v. *Grimshaw.*

A patentee will not be taken to claim well-known things.

Haworth v. *Hardcastle.*

Haworth v. *Hardcastle.*

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 the patentee 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 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 of them 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 to a wider range than the facts would warrant; on the contrary, such con-

struction ought to be made as will, consistently with the fair import of the language used, make the claim of invention co-extensive 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 part of his own invention." *Haworth* v. *Hardcastle.*

In the case of *Crossley* v. *Beverley* (3 C. & P. 515), the specification gave no directions respecting a condenser, which was well known to be an essential part of every gas apparatus. "Brougham, for the defendant: The things comprised in the specification will not make a gas apparatus. It will be incomplete for want of a condenser. Lord Tenterden, C. J.: A workman who is capable of making a gas apparatus would know that he must put that in. Brougham: The specification does not direct it to be put in. Lord Tenterden, C. J.: No, but it does not tell you to leave it out. There is nothing in that: in the construction of a specification the state of the particular manufacture at the date of the patent must be kept in view." The specification is to be construed according to the state of the particular manufacture at the date of the patent.

In *Elliott* v. *Turner* (15 L. J., C. P., 49), the patent was for the manufacture of buttons, and the specification claimed, amongst other things, "such figured woven fabrics to the covering of buttons (with flexible shanks made *Elliott* v. *Turner.*

Elliott v. Turner.

by pressure with dies), as have the ground or the face of the ground woven with *soft or organzine silk.* The question raised was whether *any soft silk* or *only organzine silk* was within the patent. Parke, B. on delivering the judgment of the Court of Error, said, "The word 'or' in its ordinary and proper sense, is a disjunctive particle, and the meaning of the term, 'soft or organzine' is properly, either one or the other, and so it ought to be construed, unless there be something in the context to give it a different meaning, or unless the facts proved in evidence with reference to which the patent must be construed, should show that a different construction ought to be made. There was nothing in the context to lead to a different construction of the words; but the facts might be such that applying the patent to them, the word 'or' ought to be construed, not in its proper sense, but as giving another description of the same thing, and the words read as if they had been 'soft, otherwise called organzine silk;' and if the fact was that at the date of the patent, *organzine* was the only species of soft silk in known use for weaving satin, that would be a sufficient ground for construing the specification which applies to such soft or organzine silk as was then used as meaning soft, *alias* organzine silk, and as including organzine only. But if there was soft silk as well as organzine silk used for

the purpose at that time, then the specification must be construed in its proper sense, and both species would be within the patent. The interpretation, therefore, which the learned judge put upon the patent was not correct, unless the facts were such as to lead to it, and these facts were for the determination of the jury. The learned judge should not have told the jury absolutely that soft and organzine silk were the same, but that the words were capable of being so construed, if the jury were satisfied that, at the date of the patent, there was only one description of soft silk, and that organzine, used in satin weaving; but otherwise, that the proper and ordinary sense of the word was to be adopted, and the patent held to apply to every species of soft silk as well as to organzine."

Elliot v. *Turner.*

The nicety to which the distinction between a claim for a principle usefully applied, and a claim merely for the particular method or form of the application, may be carried, is well illustrated by the case of *Hullet* v. *Hague* (2 B. & Ad. 379). In that case, Hullet claimed, as assignee under a patent granted to Kneller, in 1828, and Hague justified under another patent, granted to Knight and Kirk in 1822. It was contended, for the defendant, that both specifications claimed the forcing of air in finely-divided streams through the body of a fluid, for the purpose of facilitating its evaporation at low temperatures. And that

Hullet v. *Hague.*

Difference between a claim for a principle usefully applied and a method.

Hullet v. *Hogue.*

neither of the patents could be considered as granted only for each particular apparatus, which were respectively given by way of illustrating the principle common to both. This view of the case, however, was overruled in the following judgment by Lord Tenterden. After stating the patent granted to Knight and Kirk, and the specification, his Lordship proceeded as follows:—"This was in substance an invention for a process for the more rapid crystallization and for the evaporation of fluids at comparatively low temperatures; this object being effected by means of a coil of pipes lying at the bottom of the vessel, perforated with small holes, and thus operating on the liquid, or by a shallow cullender placed at the bottom of the vessel. It was proved that a pipe employed and acted upon in the manner described in the specification, viz., by forcing the air, at the end of it, would accomplish that object.

"The patent on which the plaintiff relied, and for the infringement of which this action was brought, was for certain improvements in evaporating sugar, which improvements were also applicable to other purposes. By the specification, Kneller declares that his invention consists in a method or process, and certain apparatus as thereinafter described. He does not claim as his invention the principle, but the apparatus. He is enabled to evaporate

liquids at a low temperature. It is evident the object of the two patents is the same; but the mode of effecting that object is different. The specification continues, 'and I further declare that my said invention and improvement consists in forcing by means of bellows, or any other blowing apparatus, atmospheric or any other air, either in a hot or cold state, through the liquid or solution subjected to evaporation.' Now, it was said, that the words which immediately follow, 'and this I do by means of pipes,' constituted a separate and distinct sentence from those which immediately preceded them; and that the patentee had stated his invention in the preceding sentence, and had claimed the same invention as that described by Knight and Kirk in their specification. But we think that the words, 'and this I do by means of pipes,' &c. must, in conjunction with those which immediately precede them, be taken to form one entire sentence; and that they amount altogether to an allegation on the part of the patentee, that his invention consisted of the method or process of forcing by means of bellows, or any other blowing apparatus, hot or cold air through the liquid subjected to evaporation, this being effected by means of pipes placed as directed in the specification. Now, the method described in Knight and Kirk's patent appears to us to be perfectly different. It is either to

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have a pipe, accommodated to the form of the vessel, or a cullender, placed at the bottom of the vessel. The method described in the plaintiff's specification, is to have a large horizontal tube, near the surface of the liquid, into which there are introduced a number of small perpendicular tubes, descending through the liquid to the bottom of the vessel, and having their lower ends exactly on a level and parallel to the surface of the fluid. The air is then forced by the blowing apparatus from the open end of the large tube to the other end which is closed, and as soon as the large tube is filled, the air descends through the smaller tubes to the bottom of the vessel, and bubbles up through the liquid, and the evaporation is thereby kept up constantly and equally in all parts. It appears to us that this is a method or apparatus perfectly distinct from the other, and for that method and apparatus the patent was taken out. We are of opinion, therefore, that there should be no rule in this case."

The first clause of the condition.

So far we have been considering the requisites which are included in the first clause of the condition in letters patent, relating to a sufficient specification.

In the language of a learned Judge, an inventor should describe his invention distinctly, so as not to hang terrors over people's heads; but state clearly what they may and what they

may not do without rendering themselves liable to the patentee.

It is now intended to deal with the other distinct division of the condition by stating and illustrating certain rules, to enable a patentee to *particularly describe and ascertain in what manner his invention is to be performed.* The second clause of the condition.

The object of this clause of the condition is to secure the greatest benefit to the public at the expiration of the patent; that there may be a fair bargain between the inventor and the public, the inventor receiving an exclusive use of his ingenuity for a period, provided he so describe his invention that, when the letters patent shall have expired, any person or workman connected with the particular trade or calling to which the invention relates, may possess the full advantage of the inventor's discovery. This proposition is the pith of all the decisions upon this clause. Its object.

The specification under this division, as already stated, need not be intelligible to all the world. It will answer every purpose, and really best satisfy this part of the condition, if it be intelligible to a well-informed workman in the particular trade, and if it provide him with the requisite directions for putting the invention fully into effect, in the most beneficial *manner, without misleading him in the details.* The specification must stand or fall by itself; it must not be helped out, corrected, or Specification need not be intelligible to all the world.

illustrated by the patentee, or by any other person.

Rex v. Arkwright.

In the early and important case of *Rex* v. *Arkwright* (Webs. Cases, 66), Buller, J., very clearly laid down the principles of the law on this clause of the condition. Of a sufficient description, he says, "Upon this point it is clearly settled at law, that a man, to entitle himself to the benefit of a patent for a monopoly, must disclose his secret, and specify his invention in such a way, that others may be taught by it to do the thing for which the patent is granted; what the act is; and it must put the public in possession of the secret, in as ample and beneficial a way as the patentee himself uses it. This, I take, to be clear law, as far as it respects the specification, for the patent is the reward, which, under the Act of Parliament, is held out for a discovery; and, therefore, unless the discovery be true and fair, the patent is void. If the specification, in any part of it, be materially false or defective, the patent is against law, and cannot be supported. It has been truly said by the counsel, that if the specification be such that mechanical men of common understanding can comprehend it, to make a machine by it, it is sufficient; but then it must be such that the mechanics may be able to make the machine by following the directions of the specification, without any new inventions or additions

of their own. The question is, whether, upon the evidence, this specification comes within what I have stated to you, to be necessary by law, in order to support it." *Rex v. Arkwright.*

And the same opinions were expressed by Tindal, C. J., in the recent case of *Walton* v. *Potter and Horsfall* (Webs. Cases, 595). "Generally speaking, the rule which is laid down upon occasions when the sufficiency of the specification is called in question, is this—that as these specifications are drawn by men who are more conversant with the particular article than juries, who are selected indiscriminately from the public, and certainly much more than judges, whose knowledge is confined to one particular department, credit is given to witnesses, if they are conversant with the subject-matter of the invention, and are able to tell you, and you believe it, that they see enough on the face of the specification to enable them to make the article without difficulty. You know the object of the specification is, that it is the price which the party who obtains the patent pays for it, and it would be a hard bargain on the part of the public, if he were allowed to clothe his discovery and his description in characters so dark and so ambiguous, that no one could make from it when the fourteen years have expired, and he should not have paid the price for which he enjoyed the exclusive privilege, but that he should *Walton v. Potter and Horsfall.*

Walton v. Potter and Horsfall.

have it in his own hands still, for as long a period as he chooses; and, therefore, it is always a proper answer when a patent is set up, to say, that you have not so described it, that it may be understood."

Gibson v. Brand.

And, again, in the case of *Gibson* v. *Brand* (Webs. Cases, 629), the same learned Judge said, The question for you is, "whether it (the specification) is so worded, and such explanations are given in it, that a person of a sufficient degree of understanding on the particular subject, could carry the provisions of the specification into effect, and obtain the proposed result. The specification ought to be so clearly worded as to lead, without any doubt, or difficulty, to that result, because it is the price that the man who takes out his patent pays to the public for their being so long kept out of the enjoyment of the commodity, or manufacture that is protected; the price he pays is, that he will lodge such an account of his own discovery and invention, as will enable the public on the expiration of the fourteen years, to have as free and unreserved use of the inven tion as he himself. Therefore every man, who is an honest man, is bound to pay that price justly and fairly, and to word his specification, which he is obliged by the terms of the patent to enrol in the Court of Chancery, in such a way as to be clear of all doubt. Now, I cannot say, that I think this is a very clear spe-

cification. I cannot read through these eight different heads, which I understand to be different points, that are sought to be protected by the patent, without thinking there has been a mixture rather of object, and purpose, or design, to which the party means to apply his patent, with that which is more strictly and properly the process by which the object is meant to be obtained; the mixing them together, and not keeping them separate and distinct, tends very much to obscurity in the document itself."

Gibson v. Brand.

In *Bickford* v. *Skewes* (Webs. Cases, 218), the invention was a miner's safety fuze. "The specification, so far as it is material to be now stated, was thus:—

Bickford v. Skewes.

"'The instrument I manufacture, by the aid of machinery and otherwise, of flax, hemp, or cotton, or any other suitable materials, spun, twisted, and countered, and otherwise treated in the manner of twine-spinning and card-making, as by the several operations hereinafter, and in and by the drawings hereunto annexed, mentioned and described, by means whereof I embrace, in the centre of my fuze, in a continuous line throughout its whole length, a small portion, or compressed cylinder, or rod of gunpowder, or other proper combustible matter, prepared in the usual pyrotechnical manner of fireworks for the discharge of ordnance.'

Bickford v. *Skewes.*

"Upon these words it was first objected, that the plaintiff had failed to show any other material but common gunpowder had ever been used in the fuze, or, if introduced, would answer the purpose desired. And the first part of this objection is true in fact; but it seems to us immaterial, if other materials not specified (and it is certainly not necessary to specify all), but still within the description given, will answer the purpose. No ambiguity is occasioned—nothing that can mislead the public, or increase the difficulty hereafter of making the instrument, by the introduction of terms which import the patentee has himself used them.

"The latter part of the objection, if true in fact, would have been more material, because it does tend to mislead, 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; but there was reasonable evidence that other combustible substances, prepared in the manner described in the specification, would be introduced to answer the purpose of the patent.

"Colonel Pasley, a most competent witness, had no doubt one substance answering the description, namely, detonating powder, might be used; and the jury were at liberty to infer that any similar substance, prepared as required by the description, would have the same

effect. The other parts of the instrument necessarily limited the combustible substances to be used to such as are capable of being reduced to a fine powder, and introduced in a very thin continuous stream, or thread, into the centre of the fuze. *Bickford* v. *Skewes.*

"Some knowledge of pyrotechnics is and may probably be required in the person who is to read the specification for the purpose of making the instrument. The specification is addressed, not to persons entirely ignorant of the subject-matter, but to artists of competent skill in that branch of manufacture to which it relates, and such persons would be at no loss to select, if selection were at all necessary, the proper combustible material, from those prepared for the discharge of ordnance for his purpose."

The specification must be intelligible to a workman of ordinary knowledge and skill in the particular trade or business, to which the subject-matter of the patent belongs. It will not be sufficient if it be only intelligible to a scientific or highly educated person. It should be intelligible to a workman and not solely to a scientific man.

In *Morgan* v. *Seaward* (Webs. Cases, 178), Alderson, B., said: "Mr. Brunel says, 'I have read the specification, and I think I could construct by it a machine at any required angle without difficulty.' But whether Mr. Brunel could do it or not is not the point. I dare say Mr. Brunel, the inventor of the block ma- *Morgan* v. *Seaward.*

Morgan v. *Seward.*

chinery, could invent anything 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." And

Neilson v. *Harford.*

in *Neilson* v. *Harford* (Webs. Cases, 314), the question being, whether the specification gave sufficient instruction as to the manufacture and form of the closed vessel, or receptacle for the heated air, between the blowing apparatus and the blast furnace, Mr. Baron Parke stated the same distinction between a mere workman and a scientific man, and said—"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 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 the specification, then I think that this specification is good, and that the patent may be supported as far as relates to that." But even the testimony of a practical workman cannot be received if he has been assisted or instructed by the patentee. In *Morgan* v. *Seaward*, Alderson, B., on reviewing the evidence of a witness, who said, "I could, without any difficulty, make the machine so that the paddles could enter the water at any angle," and who made the models used at the trial, observed, "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 paddle 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 have given, he could do it. Those are reasonable data for him to require, and if, with his

Neilson v. Harford.

And the workman must not by assisted by the patentee.

Morgan v. Seaward

Morgan v. *Seaward.*

ordinary skill and knowledge, and without that peculiar knowledge he has obtained in consequence of his connexion with the plaintiffs, and with this cause, he could do it, that would be evidence on which you would be 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" (Webs. Cases, 179).

Nor by any person acquainted with the subject-matter of the patent.

And a specification cannot be rendered good if otherwise defective or deficient, by the explanation of any obscurity or misstatement it may contain, by a person well acquainted with the particular arrangement or process which is its subject-matter. This was most distinctly laid down by the Court of Exchequer, in *Neilson* v. *Harford* (Webs. Cases, 371). Parke, B., in delivering judgment, speaking of the patentee and his specification, said: "In the specification, after stating that the air heated up to a red heat may be used, but that it is not necessary to go so far to produce a beneficial effect, he proceeds to state, that the size of the receptacle will depend on the blast necessary for the furnace, and gives directions as to that." And then he adds—" the shape of the receptacle is immaterial to the effect, and may be adapted to local circumstances. It is this part of the specification that has raised the difficulty. At

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the trial, I construed this passage as meaning, that the shape was immaterial to the degree of effect in heating the blast; and if this were so, the jury have, by their finding, negatived the truth and accuracy of this statement; the specification would be bad, as containing a false statement in a material circumstance, of a nature that, if literally acted upon by a competent workman, would mislead him, and cause the experiment to fail. *Neilson v. Harford.*

"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."

A specification should not omit anything at all necessary or even convenient to the full and efficient practice of the invention. It should state whatever will facilitate its application. And it must require neither trials nor

A specification should state all that is necessary, and not need experiments

experiments to put it into effect so as to produce some benefit, but experiments made only for the purpose of obtaining the greatest benefit will not render the patent void, because the law only requires an invention to provide some useful method of applying the spirit or substance of his invention, and does not insist upon any particular degree in that usefulness.

Neilson v. Harford.

In *Neilson* v. *Harford* (Webs. Cases, 316), it was admitted that Neilson's invention brought the temperature of the furnace to such a height as to render the use of the water twires instead of the common twires inevitable. Twires are the metallic cases into which the pipes are introduced to supply the blast, and the water twires are kept below a certain temperature by the circulation of cold water through them. Parke, B., said, "Now if that should be your opinion, another objection to the specification is open: it omits to make all mention of water twires or other protection; for if this apparatus would not be beneficial without them; then, in that case, it is of no use to the public as it is described in the specification, and the specification would be bad. That, I think, would be clear. Then the question of fact arises, whether you are satisfied upon the evidence of those gentlemen, one of them a practical gentleman; and I call your attention to what has been spoken by Mr. Penrice, who says—that in point of fact, they did use at the

Calder Iron Works, twires of the ordinary description, dry twires, and that they continued to use them for two years; and also continued to use this process beneficially. Therefore, that is evidence to be set off against the other. Whether they could use the process in the simplest form beneficially, is left in matter of doubt; but unless they could use the process in the simplest form in which a man could make this, according to the specification, it appears to me that the objection as to the twires is also a good objection to it, because then they ought to have been introduced, and it is not beneficial unless it is introduced. Therefore it is not a good subject of patent unless those twires are added to the apparatus, as described in this specification; and on that ground, it would appear to me that the specification was defective. Then you will have the goodness to attend to that evidence, and if you come to the conclusion, that without the water-twires, though more beneficial with them, there still would have been an apparatus which would work beneficially, and be worth while to set up, the objection founded on the water-twires vanishes."

Neilson v. Harford.

And in the same case (Webs. Cases, 321), the patentee at first tried the effect of internal partitions in the closed vessel, between the blowing apparatus and the blast furnace, but they were not described in the specification.

Parke, B., told the jury, that if they thought the patentee knew they were useful and omitted to state that in the specification, it would be void.

Rex v. *Arkwright.*

In *Rex* v. *Arkwright* (Webs. Cases, 70), there was nothing in the specification to show the difference in the velocity of certain rollers, although there must have been a difference, because the diameter of some was greater than that of others. And it was declared defective. Buller, J., said: "He (the defendant) knew to a certainty what it was. The man comes to give an account of the invention—says, I had calculated it, and the difference of the velocity was to be as five to one; this is the way I made my rollers. Now the defendant has not said a word of that in his specification. In that, he has kept back the knowledge he had, as to the size of the rollers and their velocity, and it is left to people to find it out as chance may direct."

Wood v. *Zimmer.*

In the case of *Wood* v. *Zimmer* (Holt, N.P., 60), the patent was for "a method of making verdigris." The patentee had been in the habit of putting aquafortis in the boiler, which caused one of the ingredients, the copper, to dissolve more rapidly; but the verdigris made with this assistance was not better, or cheaper, than that made according to the specification. "It is said, that the method described makes verdigris, and the specification

is therefore sufficient. The law is not so; a man who applies for a patent, and possesses a mode of carrying on the invention in the most beneficial manner, must disclose the means of producing it in equal perfection, and with as little expense and labour, 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 that 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 aquafortis as with it, still, inasmuch as it would be made with more labour by the omission of aquafortis, it is a prejudicial concealment, and a breach of the terms which the patentee makes with the public" (Gibbs, C. J.). These decisions are in keeping with the early case decided by Lord Mansfield (Bull. N.P. 76), which was a patent for steel trusses; and Buller, J., cites it in these words: "Slight defects in the specification will be sufficient to vacate the patent. In a case before Lord Mansfield, for infringing a patent for steel trusses, it appeared that the patentee in tempering the steel, rubbed it with tallow, which was of some use in the operation; and because this was omitted, the specification was held to be insufficient, and

Wood v. *Zimmer.*

Turner v. *Winter.*

Turner v. Winter.

the patent was avoided" (*Turner* v. *Winter*, Webs. Cases, 82).

And Alderson, B., also cites this case, in *Morgan* v. *Seaward* (Webs. Cases, 182), a patent for improvements in steam-engines, and paddle-wheels. "He (a witness) says, practically speaking, the difference in the length of the rods (to move the float-boards) 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 make the machine to work more smoothly (the tallow was used in tempering the steel). 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 stated in the specification as 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."

Turner v. Winter.

The opinion of Lord Mansfield on this clause of the condition has been well repeated in a letter by Mr. Bramah to Chief Justice Eyre (p. 70). "Lord Mansfield said: The law relative to patents requires, as a price the individual should pay the people for his monopoly, that he should enrol, to the very best of his knowledge and judgment, the fullest and most effectual description of all the particulars on which the effect depended, that he was at the time able to do. And it was further remarked by the defendant's advocate, and to which his lordship assented, that even more was required in some instances; for as the patent was secured to the patentee four months before he was obliged to enrol his specification, this allowance was purely for the purpose of giving the inventor the full opportunity of making experiments for his information; and also that he might have an opportunity of calling in to his assistance the knowledge of others, on points where either his learning or his practice fell short, in enabling him to complete his specification in a style and manner the most explanatory and comprehensive possible. And he further agreed, as near as I can recollect,

Lord Mansfield's opinion.

Lord Mansfield's opinion.

that no omission or defect in this instrument could admit of an apology, while it was in the power of the patentee to have avoided it by the means above mentioned, no more than it would be sufficient for the author of an ungrammatical publication to attribute it to a want of scholarship, while surrounded with scholastic abilities in want of such a job. My Lord Mansfield agreed that this is what he understood to be the doctrine of patents, and cited an instance where there was in the specification such an omission as must have been fatal to the patent had it ever been contended in a court of law. This was a patent granted to Dr. James for fever powders, in the specification of which he has mentioned the articles only of which these powders are composed, and omitted the proportion or quantity. This being the case, continued his lordship, Dr. James never durst bring an action for infringement, and it was certainly [illegible] him not to do so, as no patent could stand on such a specification. For, said his lordship, I think more depends in the composition of a medicine —on the proportion of the drugs, than on their quality; as we find it a fact too notorious that whatever preserves life, taken in too great a quantity will, in some cases, instantly destroy it. Mercury, for instance, though used with a more general effect, perhaps, than any other article in the materia medica, would produce

the most baleful consequences, applied without regard to proportions" (Webs. Cases, 54, n. (*e*)).

No trials or experiments except to obtain the greatest benefit.

The invention must be so described as to need neither trials nor experiments to put it into effect to some benefit. If trials or experiments be required to obtain the greatest benefit, or a benefit beyond that stated in the specification, they will not affect the patentee's right, or be taken to show that he has not fully ascertained and described the manner in which his invention is to be performed.

Rex v. Arkwright.

In *Rex* v. *Arkwright*, it appeared, during the trial, that a roller was necessary to the feeder, to give regular direction to the work. And Buller, J., said: "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" (Webs. Cases, 67).

Again, "Wilkinson (a witness) took his information, or a great deal of it, from the defendant himself, and supposing it true that he, or any other person instructed by the defendant, and having seen what he does, can make a machine from the specification;

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yet that will never support it, unless other people, from the specification itself, who have no knowledge in the business, can also do it. That is not the case with this man; but the last thing he says is also a material thing against the patent, for he says, for different purposes different proportions of the rollers are necessary. How is a man to find that out? It is not said in the specification that it must be different in the one case from the other, and that you must have different rollers for hemp or for cotton. All this remains to be the subject of a future discovery. Moore says, with due attention to the old machine, and an accurate attention to the specification, I could direct a skilful artificer to make the machine. This is all a very ingenious sensible man can say of this specification. He has examined the instruments and machine, and seen a great deal of it between the trials, and at last he believes, with all the extreme caution that I have mentioned to you, that he could direct a skilful artificer to make the machine. He says, that as to No. 3, a piece of cloth, with cotton or any other material that was to be carded, rolled up in it, would certainly move much better and more steady with a roller within-side, but it would do without it. If wanted, he thinks it would easily occur to a mechanic to put it in, that is, that a sensible man would have understanding enough to supply any

defect in this specification; but in this case it proves the specification is insufficient. It will not do of itself, but wants something to be added; it is deficient, and there is nothing in the specification that imports there should be a roller in it" (Webs. Cases, 69, 70). *Rex v. Arkwright.*

In *Rex* v. *Wheeler* (3 B. & Ald. 353), the invention really consisted in a method or process of rendering malt soluble in water, and making it colour the liquor in which it was dissolved, by the application of a high degree of heat. And the Court of King's Bench was of opinion, that the patent could not be sustained, as, amongst other failings, the specification left many matters of great importance to be determined by trial and experiment. *Rex v. Wheeler.*

"The patentee does not profess to be the inventor of an engine, instrument, or organ, to be used for the accomplishment of some purpose, or, at least, of a process to be so used. He says, that a coffee-roaster, or a kiln, or anything by which the grains may be kept in motion during their exposure to the requisite degree of heat, may be used. Neither has he described any certain or precise process, which, admitting that there may be a patent for a process only, ought unquestionably to be done. He does not mention the state in which the malt is to be taken, for the purpose of undergoing the process; whether *in a moist or* dry state, as was before noticed. He does not

Rex v. *Wheeler.*

say what heat, beyond 400° of Fahrenheit, may be used: he does not furnish the operator with any means of knowing when he has the degree of heat: he does not say during what length of time the process is to be continued, but contents himself with saying, that the proper degree of heat and time of exposure will be easily learned by experience, the colour of the internal part of the prepared grain affording the best criterion. A specification which casts upon the public the expense and labour of experiment and trial is undoubtedly bad. 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 really have given any useful or valuable information to the public; so that, in either way of viewing the case, there is no certain and clear process described, or the process described is such as might be practised without the assistance of the patentee."

Morgan v. *Seaward.*

In the case of *Morgan* v. *Seaward* (Webs. Cases 173-6), Alderson, B., in his charge to the jury, cites and confirms the cases of *Rex* v. *Arkwright* and *Rex* v. *Wheeler*, and insists very strongly upon the necessity of a specification being practicable without trials or experiments, as indispensable to the validity of a patent. One of the objects of the patent in

Morgan v. *Seaward* was "an improvement on paddle-wheels for propelling vessels, whereby the float-boards or paddles are made to enter and come out of the water in positions the best adapted, as far as experiments have determined the angle, for giving full effect to the power applied." The specification only professes to give directions as to the mechanical means for attaining any selected angle at which a float-board shall enter and come out of the water, and attempts to show how this may be done by a particular combination of rods, bent stems, a disk and crank, but provides no instructions to enable a workman of ordinary skill to effect this object without making trials and exercising his own ingenuity. *Morgan v. Seaward.*

And Mr. Baron Alderson said, "Has Mr. Galloway (the patentee) sufficiently described it (the paddle-wheel) 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 *Rex* 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

Morgan v. *Seaward.*

of their own (*Rex* v. *Arkwright*, (Davies's Cases, 61). 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 understandings 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 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 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 patentee should not be tripped up by captious objections which do not go to the merits of the specification. Now, applying these 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 will 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

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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 happened 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 in 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 (*Rex v. Wheeler*, 2 B. & Ald. 349). That was a patent for drying malt, and one of the objections taken was, the patentee did not state in his specification, the degree 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 colour of the internal part of the prepared grain afforded the best criterion."

"Surely then, 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 colour the malt ought to be, and that, by experiment, he would learn what degree of temperature was exhibited at the time when the proper degree of colour 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 malsters, and skilful driers 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 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 labour of experiments and trials is, undoubtedly, bad. Then, in this case, the defendants take that line of argument; they

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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. In fig. 4, we 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, he gives no dimensions; he fixes no points either for the centre of the eccentric, or for the crank to which the eccentric is attached; therefore, if those can only be ascertained by experiment subsequently to be made, then the specification is bad. The whole in some degree, turns upon the length of the rods, and the position for 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 moveable 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

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the one side, and on the other (Webs. Cases, 177-8). . . . . .

. . . . . .

"Now, Mr. Donken 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 extension; 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 moveable rods. What are these 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 upon 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 were gone into. He says, 'The ordinary workman 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 the 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" (Webs. Cases, 183-4). *Morgan v. Seaward.*

The learned Judge then reviews the evidence of Mr. Brunton, Mr. Peter Barlow, Mr. John Donken, Mr. Bramah, and Mr. Francis Bramah, which was in substance and effect a denial by each that, in his opinion, a workman could make the float-boards of a paddle-

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wheel enter and leave the water at any given angle from directions given in the specification, and concludes thus :—"Now, gentlemen, I have gone through the evidence on both sides on this point; and the question upon this part of the case resolves 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 specification 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 (Webs. Cases, 185).

Stevens v. Keating.

In *Stevens* v. *Keating* (19 Law J. Rep., Ex. 59), Pollock, C. B., said: "The title of the patent is for 'a process or processes, method or methods, of combining various materials so as to form stuccoes, plaster or cements, and for the manufacture of artificial stones, marbles, and other li[illegible]stances.'

"The specification states the invention to consist in producing certain hard cements, of the combination of the powder of gypsum, powder of limestone and chalk, with other materials, such combination being (subsequent to the mixing) submitted to heat. The specification then states the method of making cement from gypsum, in the course of which alkali is to be used, and is to be neutralized with acid (it is stated sulphuric acid is best for the purpose); the result is to be subjected to some furnace which will produce a red heat. The method of making cement from limestone and chalk is then described, which does not materially differ from the other process, which seems to consist in the use of acid afterwards, neutralized by alkali, and subjected to heat. The specification then states the mode of using the cement, and concludes, as usual, with the claim as 'above stated.' *Stevens v. Keating.*

"And the question is, whether this is a good specification. . . . . .
Only one alkali (potash) and one acid (sulphuric) are mentioned in the specification; but manifestly the inventor does not confine himself to these; if he did, the defendant would be entitled to a verdict, on the plea of not guilty, for he has used neither. To what extent, then, does the claim of the plaintiff go beyond the alkali and acid named? It must either be a claim of all acids and alkalies that

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will answer the purpose. If it be a claim of all acids and alkalies, it is clearly bad, as there are some that will not answer the purpose. If it be a claim of those only which will answer the purpose, it is as clearly bad, in consequence of not stating those which will answer the purpose, and distinguishing them from those that will not, and so preventing the public from being under the necessity of making experiments to ascertain which of them will succeed and which will not. And this was expressly so determined by the Court of King's Bench in *The King* v. *Wheeler*, where they said that a specification which casts upon the public the expense and labour of experiment and trial, is bad; in any view, therefore, this specification is defective, and we think there ought to be no rule."

Trials or experiments allowed to obtain the greatest benefit of the invention.

But if trials or experiments are required to obtain the greatest benefit of the patented invention, and not to obtain any benefit whatever, they will not vitiate the grant.

Neilson v. *Harford.*

In *Neilson* v. *Harford* (Webs. Cases, 317), Mr. Russell, a witness, gave it as his opinion that a workman of competent skill would be able, directed and instructed by the specification alone, to construct such a receptacle for the hot air as would produce the greatest possible heat in the furnace. And Parke, B., told the jury that was not the point. "The point is, whether it can be used beneficially, taking it in the

simplest form. If, in order to use it beneficially at all, experiments were necessary, about which a good deal was said by the Attorney-General, then the specification would be void. If it were necessary to use experiments in order to have the benefit of the invention, which is claimed by the specification, in that case it would be void; but if in this case it is only necessary to have recourse to experiments in order to have the full benefit that the subject is capable of, it appears to me that it would not void the patent, because, though it is a subject beneficial in the simplest form of application, it is a vast deal more useful when the improvement takes place; and, in order to make the greatest improvements, unquestionably many improvements are necessary; and even at this very moment, notwithstanding the great improvements that have taken place, there is no doubt that the matter is not in that state of improvement which in all probability it will be in the course of a few years. It does not appear to me, therefore, that what the Attorney-General has dwelt upon, with reference to the evidence in the case, that that affects the patent. If experiments were necessary to produce any degree of benefit under the patent, then, in that case, I think the specification is void, for it does not give the requisite degree of temperature; but if the simplest form would be productive

Neilson v. Harford.

Nelson v. *Harford.*

of benefit, it appears to me that the specification is good."

A specification must state one or more methods of using the invention.

"A specification must state one or more methods, which can be followed for the purpose of accomplishing and carrying into effect the invention. One of the methods stated in this case is the application of a filter, composed of charcoal, formed by the distillation or carbonization of bituminous schistus. It must therefore be shown that the purpose will be accomplished by following that method" (Mr. Baron Alderson, in *Derosne* v. *Fairie*, Webs. Cases, 165).

Derosne v. *Fairie.*

A specification should be free from words or descriptions that may mislead.

A specification should be free from all words or descriptions which may mislead. No part of the machinery or method should, by the description, be made unduly important, nor anything stated to be necessary which is not so. If one of two or more things is stated, as likely to answer any particular purpose equally well, the patentee should be certain that such is the fact. And the correct and most common, or usual name or description of any article to be used in the patented manufacture, should be given in the specification, so as neither to mislead the public nor to give them unnecessary trouble.

Lewis v. *Marling.*

On the insertion of anything likely to mislead, Lord Tenterden, C. J., said: "As to the objection, on the ground that the application of a brush was claimed as a part of the inven-

tion, 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 patent 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 the 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" (*Lewis* v. *Marling*, Webs. Cases, 495). *Lewis v. Marling.*

In *Beard* v. *Egerton* (19 L. J. Rep., C. P. 36), the patent was for "a new or improved method of obtaining the spontaneous reproduction of all the images received in the focus of the camera obscura (generally known by the name of daguerreotype)." It was argued by the defendants, at the trial, that certain directions given in the specification, for preparing the plates just before they are placed in the camera, were inconsistent with the rest of the *Beard v. Egerton.*

Beard v. *Egerton.*

specification, and would indeed render the whole process useless. Wilde, C. J., commenced the judgment of the Court by reviewing some analogous cases. "In *Russell* v. *Cowley*, which was an action for the infringement of a patent granted for certain improvements in the manufacturing tubes for gas and other purposes, a question arose as to the sufficiency of the specification. The substance of the invention was a method of manufacturing iron tubes without the use of the mandril. The specification did not, in terms, say the mandril was not to be used, but the Court held, taking the whole of the specification together, that it was plain a man of intelligence would understand that the mandril was not to be used, and that was held to be sufficient. And Baron Parke said, In the construction of a patent, the Court is bound to read the specification so as to support it, if it can fairly be done. Taking the whole effect of the specification together, it is clear that it was intended to exclude the mandril. Again, in the case of *Neilson* v. *Harford*, it was said, with reference to another specification, it is a just rule of construction to judge of the meaning of a particular phrase by taking the whole instrument together. And further, in *M'Alpine* v. *Mangnall*, where it had been argued that the specification claimed too much, the Court said, the beginning and end of the specification, it is true, rather bear the aspect of claiming the

machinery for the whole process; but taking the specification altogether, and giving its words a fair and reasonable interpretation, it seems to be obvious that the patentees only claim as their invention those improvements on the old machine that give the vibrating motion to the fabric while in the course of drying. Applying the same principle of construction to the specification before us, we think it is free from any such mistake or obscurity as would mislead a person of fair intelligence. The specification states that the process is divided into five operations. The first consists in polishing and cleaning the silver surface of the plate, in order to properly prepare or qualify it for receiving the sensitive layer or coating upon which the action of the light traces the design; it then gives a description of the operation of preparing and polishing the silver surface of the plate, the concluding part of which directs, that 'nitric acid, dissolved in water, is to be applied to the plate three different times, care being taken to sprinkle each time the plate with powder, and to rub it dry and very lightly with clean cotton;' and this concludes the description of the first operation, that is the preparing and polishing the silver surface of the plate, if it is intended for immediate use; and to this part of the specification no objection was or could be made. But then some further information is given respecting

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the preparation of the plate, in which these words are to be found—'When the plate is not intended for immediate use or operation, the acid may be used only twice upon its surface, after being exposed to heat. The first part of the operation (that is the preparation, as far as the second application of the acid) may be done at any time. This will allow of a number of plates being kept prepared up to the last slight operation. It is, however, considered indispensable, just before the moment of using the plate in the camera, or the re-producing the design, to put, at least once more, some acid on the plate, and to rub it lightly with pounce, as before stated. Finally, the plate must be cleaned with cotton from all pounce dust which may be on the surface, or on its edges.' Upon this part of the specification it is contended, the directions to apply the acid *just before the moment of using the plate in the camera*, which is the third operation, was a direction to use it after the second operation; the coating of the plate with iodine, and using acid at that period would entirely spoil the whole process. It must be remembered the passage in question is part of the directions given for the performance of the first operation, that is preparing the plate to receive the iodine; and it is to be observed, when the plate is not intended to be used immediately, when it has been previously partially, but not entirely prepared for the iodine, this

last application of acid is stated (as it seems to us) to precede the second operation. The whole passage may be considered as in a parenthesis, and the expression *just before the moment of using the plate in the camera* is put in opposition to the time of partially preparing the plate after which it is supposed to have been laid by for future use. That this is the real meaning of the passage is further manifested by what follows in page 10 of the printed specification, which is to this effect: 'After the second operation (which is the application of iodine) is completed the plate is to be passed to the third operation, of that of the camera obscura. Whenever it is possible the one operation should immediately follow the other.' It is plain therefore the patentee did not intend any separate operation to intervene between the application of iodine and the introduction of the camera obscura; the last application of the acid must therefore have been intended to precede the second application. This, we think, is the true construction of the language of the specification; and although there may at first sight be some appearance of obscurity in it, we think it is cleared away by consideration of the whole, and that it is sufficiently plain to be understood by any operator of fair intelligence; and if that be so it follows that the rule to enter a verdict in favour of the plaintiff must be made absolute."

Beard v. Egerton.

Crompton v. Ibbotson.

In *Crompton* v. *Ibbotson*, the patent was for "an improved method of dying and finishing paper," which consists in bringing the paper by the means of a cloth in contact with a heated cylinder, and the specification contained these words: "which cloth may be made of any suitable material; but I prefer it to be made of linen warp, and woollen weft." And the patentee knew from repeated trials, that no other substance would do. The rule for a nonsuit was made absolute by Lord Tenterden, C. J., in these words: "Other persons, misled by the terms of the specification, may be induced to make experiments which the patentee knows must fail; and the public therefore has not the full and certain benefit of the invention (D. & L. 33).

Derosne v. Fairie.

In *Derosne* v. *Fairie*, the patent was for refining sugar, "by means of charcoal produced by the distillation of bituminous schistus alone, or mixed with animal charcoal, and even of animal charcoal alone; whatever sort of charcoal it may be, it must be disposed on beds, very thick, on a filter of any suitable form." The question for the jury was, whether any description of bituminous schistus would answer the purpose. Lord Abinger said, "The specific point requiring your attention is, as to the bituminous schistus; whether the plaintiff has fairly communicated to the world engaged in this sort of trade,

what his object was. For he must give a full and true disclosure of the nature of the invention, and if he leaves any part of his invention in a state of obscurity and does not give definite directions how to perform it, he loses the advantage of his patent. The bituminous schistus is put first, and forms, undoubtedly, a very important part of the invention, and persons not acquainted with the sciences may be well excused for not knowing what bituminous schistus is, and *primâ facie*, it is no objection to the specification that those terms must be explained by some men of art. Mr. Faraday, and the other chemists say, there are many kinds of bituminous schistus, that they vary very much in the quantity of the sulphuret of iron which they contain, and that they do not know any process by which the sulphuret of iron can be completed expelled. The plaintiff says, the sulphuret ought to be expelled; but he does not state which of the various bituminous schistuses he uses, or any process of expelling the sulphuret of iron. Now if a person should suppose that any bituminous schistus would answer the purpose, and were to take one mixed with the sulphuret of iron, being unacquainted with the nature of it, and should attempt to distil it for the purpose of producing charcoal, he might involve himself in considerable expense, and his object would be frustrated. On the other hand, if you

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should find in evidence that there is no bituminous schistus that is proved to be used, except that which the plaintiff himself supplies, and if you should consequently think that it was not improbable he contemplated the use of his own, that might be a reason for his being so general; that as no party could find in England the sort which would answer the purpose, he might apply to the plaintiff who manufactured it abroad, to get it for him. But if such was his intention, that would destroy the patent. The question for your consideration is one of fact, whether you are satisfied upon the subject of the bituminous schistus. This part I think doubtful, but the rest of the case is with the plaintiff. I presume you would suppose that any chemist would know what bituminous schistus meant; but the evidence is that there are various sorts, and that there is none in England capable of being produced without the sulphuret of iron by any process known to experienced chemists. It may be known in France, there may be various substances there capable of producing it by calcination; if the plaintiff has it there, it is very likely he might suppose that it might be found anywhere capable of performing the object; it is his misfortune that he had not inquired whether this country produced the same; in that case he might have stated that such schistus might be imported from France,

and that would have made the patent good. Supposing you are of opinion that there are various bituminous schistuses which might not equally answer the purpose, and that those not being so set forth in the specification, it is probable that any person using the specification would be obliged to have recourse to the plaintiff to procure it, I think the defendants are entitled to your verdict." The jury found a verdict for the plaintiff, stating, in reply to a question from the Lord Chief Baron, "that they were satisfied upon the evidence that the bituminous schistus obtained in England might be adopted" (Webs. Cases, 157-8). In *Sturtz* v. *De la Rue* (5 Russ. 327), Lord Lyndhurst, C. J., said, "It is a principle of the patent law that there must be the utmost good faith in the specification. It must describe the invention in such a way that a person of ordinary skill in the trade shall be able to carry out the process. Here the specification says that there is to be added to the size certain proportions of 'the finest chemical white lead.' A workman would naturally go to a chemist's shop and ask for the finest and purest chemical white lead; the answer which he would receive would be that there was no substance in the trade by that name. He would be compelled to ask for the purest and finest white lead; and according to the evidence, the purest and finest white lead that can be procured in London will

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not answer the purpose. It is said that there is a substance prepared on the continent which is white lead, or some preparation of white lead, and that by using it in the manner described in the specification, the desired effect is produced. If that be so, the patentee ought to have directed the attention of the public to that circumstance. He ought to have said, 'The finest white lead which can be obtained in the shops in London will not do; but there is a purer white lead, prepared on the continent, and imported into this country, which alone must be used.' 'The purest and finest chemical white lead' must mean the finest and purest white lead usually gotten in the general market for that commodity, unless the public be put on their guard by a statement, that what would be called very fine and pure white lead in the ordinary sense of the trade will not answer, but that the white lead used must be of a superlatively pure and fine quality, prepared in a particular way, and to be gotten only in a particular place. If the article is not made in this country, but may be imported, it would be necessary to mention the circumstance. It is said, that the description in the specification will be sufficient, if the substance is known in the trade by the name of 'the purest and finest white lead,' or 'the purest and finest chemical white lead.' But it does not appear that there is any substance gene-

rally known in the trade by that denomination. It is alleged that the substance can be purchased at the shops in London, and two are specified. In point of fact, it has been purchased only at one of those shops, and they are not chemists' shops, but colour shops. It appears to me that this specification does not give that degree of full and precise information which the public have a right to require." And in the case of *Savory* v. *Price* (Ryan & Moody, 1), the patent was "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.'" Three recipes were given for preparing the ingredients, and a certain portion was to be taken of each and dissolved in a pint of water. It was shown that these three recipes were only Rochelle salts, carbonate of soda, and tartaric acid; that these names were not mentioned, nor anything stated to prevent the public supposing that the composition of each recipe was something new, although the articles had been long sold by their above names in every chemist's shop. On this the plaintiff was nonsuited. Abbott, C. J.:—"It is the duty of a patentee to specify the plainest and most easy way of producing that for which the patent is granted, and to make the public acquainted with the mode which he himself adopts. By reading this specification, we are

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Savory v. *Price.*

Savory v. *Price.*

led to suppose a laborious process necessary to the production of the ingredients, when, in fact, we might go to any chemist's shop and buy the same things ready made. The public are misled by this specification, which tends to make people believe that an elaborate process is essential to the invention: it cannot be supported."

Patentee must give all the knowledge he possesses at the time of enrolment.

The patentee must give the best information in his power at the time of the enrolment of his specification, as the period between that event and the sealing of his patent is allowed him, for the express purpose of improving and perfecting his invention.

In the case of *Crossley* v. *Beverley* (Webs. Cases, 112), it was argued on the part of the defendant, that the patent was bad, because the plaintiff, between the date of his patent and enrolling his specification, had invented some material parts of its subject-matter. The defendant's counsel endeavoured to show, that the plaintiff had deceived the Crown in his petition, by stating he had invented "an improved gas apparatus," which was not the fact. This view of the case was overruled, and it was also distinctly laid down, that a patentee may not only insert, but is bound to insert all those improvements in his invention which occur to him between the sealing of the patent and the enrolment of the specification. If they are more than improvements,

of course they must be made a ground for soliciting a distinct patent. Lord Tenterden said, "The objection would really come to this:—If at the time a person applies for the patent, he has in his mind an invention capable of producing the effect which he represents it to be capable of producing, and has brought that invention to a great degree of perfection, and within the time allowed by the patent for exhibiting the specification, and before the arrival of that time he perfects his invention, and renders it more complete, by the introduction of a different species of machinery, by the application of that to different mechanical parts of the machine—if so, whether that will make his patent void. No case has ever decided that, and I think it would be extremely dangerous to lay down any such doctrine. I do not see, myself, why time is allowed to prepare the specification except upon the idea that the person, at the time he took out his patent, has not brought his machine, or whatever he has invented, to that degree of perfection which it may be supposed he is capable of bringing it to, and therefore he is allowed further time to do it. If, in the interval, another person should have hit upon that which he has hit upon, the patent will not be for what in the mean time has been discovered by another person. He runs all these hazards by the delay; but if during that delay the invention was per- *Crossley* v. *Beverley.*

Crossley v. Beverley.

fected, and approaches to a perfect accomplishment of the object which he had originally in view, I own I do not see that can be any objection to the patent." And Mr. Justice Bailey delivered a similar judgment. He said, "I think the specification and the patent are to be taken as one muniment in enforcing this claim on the part of the patentee, and they only. The specification, with new improvements, would still be the thing for which the patent was obtained; and I think it is most beneficial to the public to say, that it is the duty of the inventor, if between the period of taking out the patent and enrolling the specification he makes discoveries which will enable it better to effectuate the thing for which the patent was obtained—not only that he is at liberty to introduce them into his patent, but that it is his bounden duty so to do; and that it is not sufficient for him to communicate to the public the knowledge which he had at the time he obtained the patent, but he ought to communicate to the public the knowledge he has obtained before the specification; and therefore I am of opinion, in this case, the objection which has been taken to this patent is not to be supported." And this is in accordance with the opinion of Chief Justice Gibbs,

Bovill v. Moore.

in the case of *Bovill* v. *Moore* (Davies's Cases, 400-2). "A patentee who has invented a machine useful to the public, and can construct it

in one way more extensive in its benefits 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 so far have 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. In the present case this I think appears clearly proved, that lace may be made in breadths without resorting to the means that certainly have been used, either by bending the teeth of the dividers, or making the extreme tooth longer; and it is certainly clear, that this specification does not point out to the artist that he is either to bend those teeth or to make one longer than the rest: the effect of not doing that will only be that there will be danger of the threads entangling; but still, with a competent degree of attention in the workmen, although with some delay in the work, that entanglement may be avoided, or, if not avoided, may at least be corrected as it occurs. So that the work may be performed, though in a less perfect degree, without this bending together of the teeth, or without the inserting teeth longer than the others. If Mr. Brown, since he obtained his patent, has dis- *Bovill* v. *Moore.*

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covered an improvement by bending the teeth or adding a longer tooth, he may 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 when he obtained his patent, he was apprised of this more beneficial mode of working, and did not by his specification communicate this more beneficial mode of working to the public, that will have been a fraudulent concealment from the public, and that will render his patent void."

The title and specification must agree.

It has been already stated, that every petition to the Crown for a grant of letters patent, contains a short description of the invention to be patented, and which is called the *Title*. If the specification does not coincide with this title; if the inventor, in fact, having applied for the exclusive enjoyment of one piece of ingenuity, should describe some other in his specification, the Crown is said to have been deceived in the grant, and the patent is bad. For this reason the patent, which recites the petition, and the specification are read and treated as one document, and must be consistent with each other.

Hornblower v. *Boulton.*

Grose, J., in *Hornblower* v. *Boulton*, said, "I consider the patent [that is the title] and specification so connected together as to make a part of each other, and that to learn what the patent is I may read the specification,

and consider it as incorporated with the patent" (Davies's Cases, 230). *Hornblower v. Boulton.*

"I think the specification and the patent are to be taken as one muniment in enforcing this claim on the part of the patentee" (Bailey, J., *Crossley* v. *Beverley*, Webs. Cases, 117). *Crossley v. Beverley.*

In *Croll* v. *Edge* (19 L. J., C. P. 263), the title of the patent granted was, "for certain improvements in the manufacture of gas for the purpose of illumination, and in the apparatus used when transmitting and measuring gas." The specification enrolled did not apply to this title, but to another, in which the words "therein and" were interpolated between the word "used" and the words "when transmitting and measuring it," so that the specification represented itself in its introductory part, as a specification of an invention "for improvements in making gas, and in the apparatus used *therein*, *and* when transmitting and measuring it." Maule, J., in delivering the judgment of the Court, said: "The insertion is very slight in regard to the number of words, but it wholly alters the meaning: that is to say, it adds most materially to the meaning of the words between which it is interpolated, and extends substantially the grant of the Crown; because the title, as suggested in the specification, represents the patent as being a patent for two kinds of things at least: one, the making of *Croll v. Edge.*

Croll v. *Edge.*

gas, and the other, what is well known to be a perfectly distinct thing, the transmitting and measuring it. The making of gas is a chemical operation well known, the object of which is to evolve from coal, or other suitable material, by means of heat ordinarily, the gas which is contained therein, or capable of being produced therefrom. The apparatus used in that process is described in the specification as one of the objects of the patent. The other object mentioned in the title is the transmitting and measuring it. Transmitting gas is done after it has been made and stored up in gasometers, and is done by sending it through pipes, and through another instrument used for measuring it, called 'a gas meter,' a more regular word for the purpose of measuring gas, 'gasometer,' having been already previously applied, before the invention of the gas meter, to the larger reservoir, which is used for storing. These two objects are evidently perfectly different from one another, the manufacture of gas being one thing, and transmitting and measuring it, when it has been produced by manufacture, or in any other way, being a totally different object.

"Now, the patent granted was for the improvement in making gas, and in the apparatus used, not in making it, but used in transmitting and measuring it. The title of the patent did not profess to comprehend any ap-

paratus used in making gas. The patentee, in the representation which he made to the Crown, did not give warning to the Crown, or notice to persons interested in such concerns, that he considered himself at all as having obtained any right to any exclusive use of a manufacture of apparatus used in making gas. *Croll v. Edge.*

"Now, the title of the patent, as mentioned in the specification, is, as I observed before, one which comprehends, as well improvements in the apparatus used in making gas, as in transmitting and measuring it; and when the body of the specification is looked to, a main part of the matter claimed and described in the specification as the invention of the patentee is a mode which may have been, and probably was, a new mode of manufacturing retorts, an apparatus used in making gas, not used in transmitting or measuring it.

"Any person, on reading that specification, looking either to the title or through the body to ascertain more clearly what was intended to be claimed, and what was the patent, the specification of which the patentee professed to enrol, would see, without the least doubt, that the main object of his claim and of the patent, the specification of which he professed to be enrolling, was an improvement in the apparatus for manufacturing gas. Now, no patent at all has been granted to him for that, and it

Croll v. Edge.

seems to us that it is difficult to suppose the enrolling this specification, in the terms in which it was enrolled, can be considered as otherwise than an attempt either to remedy what might possibly have been an oversight, or otherwise an attempt to alter and extend the patent that had been granted; and that in doing that it seems to us the patentee has omitted to specify the restrictive patent which he had obtained, and has specified a larger and different one, which he had not obtained. We think, on the whole, therefore, that the direction of the Lord Chief Justice was substantially correct, and that the defendant was entitled to the verdict, and, therefore, that this rule must be discharged."

Rex v. Wheeler.

In *Rex* v. *Wheeler* (2 B. & Ald. 352), the title was for "a new or improved method of drying and preparing malt." The specification described methods of drying malt already made; but the title represented the invention to be also for preparing malt, that is, for making it from barley. Abbott, C. J., in delivering judgment, said: "We think the invention mentioned in this specification so entirely different from that mentioned in the patent, as that the latter (if any such there be) remains wholly undescribed and unspecified, and consequently that the issue could not be found for the defendant. It was contended that this process was in truth a preparation of malt to

answer a particular purpose, and that the purpose need not be noticed in the grant. It may be true, in general, that the purpose need not be mentioned in the grant, but if in any particular case the mention of the purpose be necessary to explain the words previously used, to show that they were not used in their ordinary and obvious sense, but in a sense limited and confined to that particular purpose, in such a case, we think the purpose ought to be mentioned. In this case, if the patentee had represented himself to be the inventor of a method of preparing malt for the purpose of colouring beer and porter, every person who read his representation would understand that the malt prepared according to his method was not intended to answer the common and known purposes of that article, namely, the brewing of beer, but was intended only for the special and particular purpose of colouring the liquor, and to be used in addition to common malt. But, as we have before intimated, we think no person could conjecture that to be the object of the invention mentioned in this patent.

Rex v. *Wheeler.*

In *Campion* v. *Benyon* (3 Brod. & Bing. 5), the title of the patent was "for an improved method of making sailcloth without any starch whatever;" the improvement stated in the specification being the production of a more pliant texture, not by the exclusion of starch,

Campion v. *Benyon.*

Campion v. Benyon. but by improved weaving: the patent was held bad.

Cockrane v. Smethurst. In *Cockrane* v. *Smethurst*, the title of the patent was for a "method or methods of more completely lighting cities, towns, and villages." The specification extended to ship-lights, convoy-signals, theatres, churches, &c., being therefore larger than the title: the patent was bad (Davies's Cases, 360).

Felton v. Greaves. In *Felton* v. *Greaves* (3 C. & P. 611), the title was for "a machine for an expeditious and correct mode of giving a fine edge to knives, razors, scissors, and other cutting instruments." The invention specified consisted of two steel rollers, about four inches long, formed with bosses and recesses, the bosses or elevated parts of one roller passing into the recesses of the other, and thus forming an acute angle between them. The bosses of both rollers were filed, and the recesses smooth. It was proved to be useful in the sharpening of knives, but it would not sharpen scissors, as for this purpose one of the rollers should be quite smooth. There were no directions as to this requisite in the specification, and the patent was held bad.

Sturtz v. De la Rue. In *Sturtz* v. *De la Rue* (5 Russ. 322), the patent was "for certain improvements in copper and other plate printing." The invention described in the specification was a process for bringing out the finer lines with greater dis-

tinctness by putting a glazed surface on the paper or card intended to receive the impression. The title was held to sufficiently describe the invention. *Sturtz* v. *De la Rue.*

In the case of *Gibson* v. *Brand* (Webs. Cases, 634), the title was for "a new or improved process or manufacture of silk, and silk in combination with certain other fibrous substances." The jury found there was not a new process; but an improved process. And Lord Chief Justice Tindal, on subsequently delivering the judgment of the Court, and speaking of the plaintiffs, said, "Claiming therefore, as they must claim, a novelty in the case, whether it be a patent taken out for machinery, or taken out for a process only, if we were to stop there when the jury have found that there was not a new process, but an improved process, although perhaps it would be a hard measure upon the plaintiffs, who call their manufacture 'our new or improved manufacture,' still I think there might be some doubt upon that finding with those words alone in the specification, whether it could be supported." *Gibson* v. *Brand.*

And the deception or misguidance of the Crown will be considered equally fatal to the validity of the grant, if it occur by way of recital in the petition, as if it appear in the title or primary description of the invention. A recital in the petition is part of the title.

In the case of *Bloxam* v. *Elsee* (6 B. & C., *Bloxam* v. *Elsee.*

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178), the letters patent recited amongst other things, that one Gamble had, by his petition, represented to the King that he was in possession of a machine for making paper in single sheets, without seam or joining, *from one to twelve feet and upwards wide*, and from one to forty-five feet and upwards in length, &c. The method of making which machine, &c. The specification was evidently confined to the description of invention to manufacture paper of one width only. There was no provision whatever made to adjust the machines, so as to alter the width of the paper. And Lord Tenterden, on a motion for a new trial, said, "I think one of the objections which has been taken in this case is valid, and must prevail; and consequently it is not necessary to give any opinion upon the others. By the patent it appears, that the patentee had represented to the Crown that he was in possession of a machine for making paper in single sheets, without seam or joining, from one to twelve feet and upwards wide, and from one to forty-five feet and upwards in length. Upon this representation the patent is granted. The consideration of the grant is an invention of a machine for making paper in sheets of width and length varying within the limits designated. If any material part of the representation was not true, the consideration has failed in part, and the grant is consequently

void, and a defendant in an action for an infringing the patent has a right to say that it is so. Now I think it impossible to say that both width and length are not important parts of this representation. It may be, that if the representation had mentioned length only, a patent would have been granted for the invention, which in its improved state, at least, is eminently useful, in a very important manufacture, as saving both time and labour, in a very considerable degree. But, although I may think this probable, I am not at liberty to pronounce judicially that it would be so."

Bloxam v. *Elsee.*

An ambiguous title may be sufficiently explained by the specification to render the patent good.

An ambiguous title may be made clear by the specification.

In the case of *Neilson* v. *Harford* (Webs. Cases, 373), the title of the patent was for an improved application of air to produce heat in fires, forges, and furnaces, and it was contended that no one would, from that title, conclude the invention to be a discovery of a process for introducing hot air into furnaces; therefore the patent was bad. Mr. Baron Parke said, "My present opinion, certainly, is very strong, that the title to the patent is not defective; that it is capable of embracing an alteration by introducing hot air. It will suit either one or the other, and the specification and the patent together make it clear what the discovery was: it was the intro-

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Neilson v. Harford.

duction of hot air by means of heating it, before it was introduced into the furnace; and unless this title had really been meant to be applied to some other discovery quite of a different nature, and afterwards by the specification applied to this, it does not appear to me that the generality of the title of the patent would make it void. It is quite different from the case (*King* v. *Wheeler*, 2 B. & Ald. 349) which has been referred to, where the patent was for preparing malt; and upon looking at the specification (as any body would infer from the title, that it was malt to be used in the brewing of beer, ale, or porter)—upon looking at the specification itself, it was not, in truth, a preparation of malt for the purpose of brewing, but a preparation of malt for the purpose of colouring, and therefore entirely distinct from the title of the patent. Upon that ground the patent was held to be void. But in this case the description seems to me to suit the subject which is detailed, to the extent that it is described in the specification, and to be applicable to that; and there is no evidence in the case to induce you to believe that that was not the plaintiff's real discovery which he meant to cover by the patent" (Webs. Cases, 312). And subsequently, on a motion to enter the verdict for the plaintiffs, Lord Chief Baron Abinger said, "If the specification is consistent with the title, that would be

sufficient. I have known persons who have had great difficulty in finding a name for their patent invention. I knew a very useful invention set aside because an ingenious person at the bar had suggested to a gentleman to take as a title to his patent, 'a tapering brush:' it did not taper; it expanded" (*Rex* v. *Metcalfe*, 2 Stark. 249: Webs. Cases, 333, and see also 334-5). And these opinions were ultimately sanctioned by the Court of Exchequer. Alluding to the objection that the title of the patent did not agree with the invention, the Court said, "We have intimated in the course of the argument, that we thought that objection was not well founded. The title of the patent is, for the 'improved application of air.' Though that is ambiguous, it is sufficiently explained by the specification, and is not at variance with it, as was the case in *The King* v. *Wheeler*." *Neilson* v. *Harford.*

In *Cooke* v. *Pearce* (Q. B., 13 L. J., N. S., 189), the title of the patent was, "improvements in carriages." The specification described certain improvements in fixing and adapting German shutters to carriages, which could not be applied to covered carriages, such as coaches and chariots. It was contended that the patent was bad: for the invention was not an improvement in carriages generally, but of shutters in a particular class of carriages. The title was too large and ge- *Cooke* v. *Pearce.*

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neral for the specification. On delivering judgment in the Court of Error, Tindal, C. J., said, "Upon the argument before the Court below, that Court held the finding to be in favour of the defendants, and gave judgment accordingly; upon the ground that from the vagueness and uncertainty of the title of the patent, that is, from the title of the patent being too general, the patent itself must be held to be void. It is to be observed, that the decision does not proceed upon the ground that the title of the patent must be held of necessity to claim more than the invention explained by the specification. As if the title had been for an invention for the improvement of all carriages, and the specification had limited the invention to the improvement of one or more species of carriages only; if the title had been for the invention of two things, and the specification had shown it to be an invention of one only out of two, in such case it may readily be admitted that the patent would have been void. In the first instance it would be void, because there was no specification agreeing with the title; in the second, on the principle laid down by Bayley, J., in his judgment in *Brunton* v. *Hawkes*, that the entire discovery of all the things for which the patent was taken out, must be held to be the consideration upon which the patent was granted by the Crown. But such an objec-

tion would not apply to the case now before us, for the words, 'improvements in carriages,' do not necessarily import in all carriages, but, in their ordinary use, may well be held to be satisfied by an invention of improvements in some carriages only. The ground of the decision however is, as before stated, confined to the vagueness and generality of the title, and to that only. Now the mere vagueness appears to us to be an objection that may well be taken on the part of the Crown before it grants a patent, but can afford no ground for avoiding the patent after it has been granted; and if such title did not accord with the specification when enrolled, or if there had been any fraud practised on the Crown in obtaining the patent with such title, the patent in those cases might undoubtedly be held void. Any evidence of a design on the part of the inventor, by choosing a vague and general title, to avail himself, at the time of enrolling the specification, of an invention not discovered by him at the time of taking out the patent, or to prevent other subjects of the Queen from availing themselves of a discovery made by them, on the ground of its falling within the range of the general terms of the title, although different from that for which the patent was really taken out, might afford such proof of fraud on the Crown, and injury to the subject, as that the vagueness

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and generality of the title might avoid the patent. In the present case, however, no such evidence was given, nor was the existence of fraud suggested, but the patent has been held void, upon the mere ground of the title being so large as to be capable of supporting a different invention from that which is found in the specification, and from no other cause. We think it would be unsafe, without express authority on the point, to lay down the rule in terms so large as appears to us to have been adopted by the Court below; for it would endanger the validity of very many patents which have hitherto been free from exception, if every patent must be held to be void simply on the ground that its title was conveyed in such terms as to be capable of comprising some other invention besides that contained in the specification—in the absence, at the same time, of any proof of intention of committing a fraud on the Crown, or of deceiving or misleading the public. It would in many cases require extreme accuracy, and nearly as much consideration as is necessary for drawing the specification, to frame a title for the patent which would be perfectly secure against ingenious objections to it, on the ground of its latitude and extent. The cases discussed and relied on below, were those of *Lord Cochrane* v. *Smethurst*, and *Jessop's case*, cited in the argument in *Boulton* v. *Bull*. If the former

were to be considered as having the authority of a case that had been discussed fully in the Court above, and had received a determination there, it would, at least, be open to the observations that the extreme generality of the title in that case far exceeded that which is now under consideration; but that case never was moved in the Court of King's Bench; and it is impossible not to see from the other objections taken at Nisi Prius to the patent, some of which were unanswerable, that it would have been useless to have carried the case further. The authority of that case cannot, therefore, be rated higher than that it was the opinion of the learned Judge who tried the cause. And as to *Jessop's case*, as cited by Buller, J., in his judgment in the case of *Boulton* v. *Bull*, it appears to differ widely from the present. The patent in that case, so far as the facts are to be collected from the report, was taken out for a watch. Now a watch does in its primary sense import an entire and indivisible article, whereas, a patent for improvements in carriages is anything but a definite and precise thing. When, therefore, it appeared by the specification or otherwise, that the invention was, in fact, limited to an improvement or addition to the watch only, the patent could not be upheld. That was not a case where the title was simply too vague and general, but where the title of

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the patent claimed a precise invention larger and more extensive than the invention itself; that is, it was a case of direct variance from the title of the patent. We think, therefore, that as, in the present case, no more is objected to than mere vagueness and generality in the title of the patent, without any evidence leading to any inference of fraud upon the Crown, or prejudice to the public, enough has not been shown to avoid the patent—a conclusion, which coincides in substance with the determination of the Court of Exchequer, in the case of *Neilson* v. *Harford.*"

Nickles v. *Halsam.*

In the case of *Nickles* v. *Halsam* (7 M. & G. 773), the title of the patent was "improvements in the manufacture of printed fabrics;" but only a single improvement was described in the specification, and the patent was held good. Tindal, C. J.: "The objection raised by this plea resolves itself into something very much like that which was taken in a case which we had in the Exchequer Chamber last term. In that case (*Cooke* v. *Pearce*) it was held, that an objection cannot be taken to the title of a patent unless some fraud upon the Crown, or detriment to the public, can be shown. Here the objection is only to the title, as describing the patent to have been granted for improvements in a certain manufacture, whereas the specification discloses only one improvement. This is certainly a most

subtle objection. If the term improvement had been used, it would have been *nomen collectivum*, and would have covered any number of improvements. I cannot see why the variance, if it be one, should vitiate the patent, the objection being merely to the title of the patent, without fraud upon the Crown or detriment to the public. On this ground, I think that the plaintiff is entitled to judgment."

Nickles v. *Halsam.*

The consideration for the grant of letters patent is indivisible and entire. If it fail in any particular, it fails altogether. The invention, as described in the specification, and from which alone its nature and character can be obtained, must be useful, new, and original. Sufficient instructions must be given for its application; and, lastly, the title and specification must agree. Any of these essential elements or constituents of the consideration being wanted, the grant, which was made solely upon the condition of their co-existence, becomes voidable.

The consideration is entire.

In *Brunton* v. *Hawkes* (4 B. & Ald. 551), the patent was solicited for "certain improvements in the construction of, making, or manufacturing of ships' anchors and windlasses, and chain cables or moorings." It was admitted at the trial that the patented mode of making anchors had never been applied to ships' anchors, although it had been already applied to the adze anchor and the mushroom anchors,

Brunton v. *Hawkes.*

Brunton v. Hawkes.

which were only used for the purpose of mooring floating lights, or vessels intended to remain stationary, and that the anchors were never taken on board. On this evidence, after mature deliberation, the Court were of opinion that the patent was void. The fitness of all three articles as subject-matters for a patent mentioned in the title being the consideration for the grant, and one failing as the essential either of quantity or novelty of invention, the whole grant becomes void. Abbott, C. J., said: "It appeared in evidence, at the trial, that the mode of making cables and anchors, introduced by the plaintiff into general use, was highly beneficial to his Majesty's subjects, and I should wish that he who introduced it might sustain the patent. Upon the full consideration of all the arguments addressed to us, and a view of the patent, the specification, and the evidence given at the trial, I feel myself compelled to say, that so much of the plaintiff's invention as respects the anchor is not new, and that the whole patent is therefore void. . . . . But inasmuch as one thing is not new, the question arises, whether any part can be sustained. It is quite clear that a patent granted by the Crown cannot extend beyond the consideration of the patent. The King could not, in consideration of a new invention in one article, grant a patent for that article and another.

The question, then, is whether, if a party applies for a patent, reciting that he has discovered improvements in three things, and obtains a patent for these three things, and in the result it turns out that there is no novelty in one of them, he can sustain his patent. It appears to me that the case of *Hill* v. *Thompson*, which underwent great consideration in the Common Pleas, is decisive on that question. In that case the patent was granted to the plaintiff, for the invention of certain improvements in the smelting of iron, and the Court of Common Pleas appear to have considered that the improvement introduced by the plaintiff into what may properly be called the smelting of iron, was the obtaining iron from that cinder and slag which before had been thrown away as refuse, and that that might be considered new. It appeared, however, that the plaintiff claimed further the merit of having discovered that the application of lime in certain stages of the process would cure a disease common to all iron, not merely to that which he was to produce, but to iron originally manufactured from the fresh ore. Now it turned out that that was not a discovery; for the application of lime to iron made from the cinder originally used in making ore, was known and practised before. No two things can be more distinct in their nature than the obtaining of iron from a material

Brunton v. *Hawkes.*

Brunton v. *Hawkes.*

from which it was impracticable to obtain it before, and the cure or prevention of a disease to which all iron is subjected. In that case, however, the Court of Common Pleas held, admitting there was novelty in the one, yet, as there was no novelty in the other, the patent was wholly void: the only difference between that case and this is, that here the plaintiff, instead of saying that he has made certain improvements, states the improvements; but still he claims the merit of having invented improvements in all the three, and that they are new, and the consideration of the patent is the improvement in the three articles, and not in one; for an improvement in only one of them would render the patent bad. The consideration is the entirety of the improvements of the three, and if it turns out there is no novelty in one of the improvements, the consideration fails in the whole, and the patentee is not entitled to the benefit of that other part of his invention. For these reasons, I am of opinion that this patent cannot be supported." And in

Kay v. *Marshall.*

the late case of *Kay* v. *Marshall* (5 B. N. C. 500), where one of two distinct inventions claimed what was not new, the patent was held to be bad. The inventor claimed to have found out "a new and improved machinery for preparing and spinning flax, hemp, and other fibrous substances, by power." One invention was for preparing flax by macera-

tion, and the other for machinery to spin the flax so prepared at the short reach of two inches and a half. This was shown not to be new. Flax and other fibrous substances had been spun with machines by which the reach was varied according to the staple or fibre of the article to be spun, and this was a fundamental principle of *dry* spinning, known and used before the granting of the letters patent; and further, the reach used in cotton-spinning had been less than two inches and a half. The plaintiff's efforts to support his patent, notwithstanding this defect, were thus stated by Tindal, C. J.:—"The answer given to this objection on the part of the plaintiff has been that the invention for which the patent has been taken out, does not consist of two distinct parts, but one entire single object only; namely, the object of macerating and spinning that macerated flax on a machine where the rollers are retained at the prescribed distance from each other. But this appears to be at variance with the specification itself, which divides the invention and the subject-matter of the patent, into two distinct parts; and even if it is to be considered as one entire invention, if part of what is claimed is not properly the subject of a patent or not new, the whole must be void." *Kay* v. *Marshall.*

The ground or principle upon which those patents were held to be bad, is the deception

Case in which entire utility of the invention is important.

practised upon, or the false suggestion made to the Crown. And from the following case it will be seen that even the entire utility of an invention may become important to its protection by a patent, if any statement or recital should suggest it as a ground for the grant, by the use, for instance, of such a word as *improvements*, where the inventor is not certain that every part of the invention is an improvement.

Morgan v. Seaward.

In the case of *Morgan* v. *Seaward* (Webs. Cases, 196), the title was, "For certain improvements in steam-engines, and in machinery for propelling vessels, which improvements are applicable to other purposes." And Mr. Baron Parke, having disposed of a point in the pleadings, said, "This brings me to the question whether this patent, which suggests that certain inventions are improvements, is avoided if there be one that 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 or 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* and *Brunton* v. *Hawkes*, 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 upon the face of this patent, as set out upon the record, that an improvement in steam-engines is suggested by the patentee, and is part of the consideration of 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*, 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

Morgan v. *Seaward.*

Lewis v. Marling.

patent itself, as one of the subjects of it, which may make a difference."

Morgan v. Seaward.

In like manner, if two distinct inventions are described in the same specification, a failure or deficiency in the account or description of either will vitiate the whole grant. "He has described two inventions, and if either of those inventions is insufficiently specified, the patent fails; for if a person runs the hazard of putting two inventions in one patent, he cannot hold his patent unless each can be supported as a separate patent" (Alderson, B., in *Morgan* v. *Seaward*, Webs. Cases, 173).

5 & 6 Will. 4, c. 83, s. 1.

By the 5 & 6 Will. IV. c. 83, sect. 1, it is provided, that any one in possession of letters patent for an invention in England, Scotland, or Ireland, may, if he think fit, enter with the clerk of the patents, under certain regulations, "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."

This power of correcting a title or specification to a limited extent, was no doubt intended to supply a remedy in those cases where, after every diligence to satisfy the conditions of the grant had been used, some excess or variance might still be found in the patent or specification. The privilege has been greatly abused in a large majority of cases, and it has almost become a custom to choose a very distributive title, and to divide or break up the specification into as many minute divisions and heads as possible, with the sole object of enabling the patentee to detach any of these several members whenever he may find it convenient. This very much increases the difficulty of understanding or applying what remains, and a specification drawn up on such a principle can never be that carefully and minutely digested document, which will alone stand an argument in a court of law, and protect either the public from imposition, or an inventor from the embarrassment and anxiety attendant upon a badly defined right.

5 & 6 Will. 4, c. 83, s. 1.

CHAPTER III.

ON GRANTING LICENCES TO USE A PATENTED INVENTION, AND ON THE ASSIGNMENT OF LETTERS PATENT.

The evidence of a right to letters patent.

LETTERS patent with the great seal attached, are *primâ facie* evidence of the right to all the privileges belonging or incident to the grant; and, therefore, convey the power to license the use of the invention, and to assign the letters patent, as well as to restrain an infringement of the exclusive right. But as these rights and privileges are transmissible from party to party, it is indispensable to consider the rules regulating such transmissions; for, by neglecting those rules, either the letters patent may be rendered void, unintentional liabilities incurred, or the full pecuniary benefit of the invention lost by the patentee. Of course these considerations do not arise where the patentee is neither desirous nor obliged to part with any portion of his interest, but intends to keep the exclusive privilege entirely in his own hands.

Few inventions, however, can be worked to any extent without the assistance of others; either from the pecuniary wants of the inventor, or the nature of the invention.

Many of the most important improvements

in manufactures have commenced with persons wanting the means of either testing or perfecting their ideas, or securing the protection of a patent; so that if an invention is not stolen and escapes premature publication, it is usually so encumbered by improvident treatment, and by the claims of parties who have advanced various sums to the inventor, upon the prospective security of his patent, that, whatever may be the merits of the invention, it sinks under the weight of these incumbrances, or its progress is arrested by the impossibility of persuading all the parties interested to submit and adhere steadily to any mutual arrangement.

The great importance of care and foresight in dealing with or charging letters patent.

And though the inventor be in no need of money, he may still find himself unable to make his invention known, or to reap the full advantages of his exclusive right, unless he grant licences, or part with some portion of his interest, varying in extent, according to the nature of the invention, and the opposition which it is likely to meet with from established interests.

It is therefore quite as much, if not more, upon the method in which letters patent are dealt with or transferred, as upon the merits of the invention, that the success of a patent depends, whether those dealings be antecedent or subsequent to the grant.

No suggestions can entirely supply the want

And of clear ideas respecting the rights of each party interested therein.

of business habits, or prevent the effects of extravagance, and the absence of method, and no strict or complete set of rules can be laid down upon such a subject; but it is hoped, that distinct ideas of the respective rights of a patentee, and of any person to whom he may *have contracted to grant an interest, either* small or large, in his patent, may, to a great extent, prevent subsequent confusion and dispute, and remove many obstacles to realizing the full pecuniary value of a patent-right. A very slight experience in the treatment of patent property will convince any one, that much loss and trouble may be prevented by timely precautions.

The power to grant licences.

Supposing that an inventor is not in want of money to perform experiments, or to meet the expense of the letters patent, and is not obliged to force his invention into practice, but that the public are perfectly willing to deal with him, his first object, and perhaps in most cases, his best plan, will be to grant licences. This the letters patent enable him to do; as they "*require and strictly command, all and every person, or persons,*" within that part of the United Kingdom called England, during the fourteen years, thereby granted, not to "*make, use, or put in practice,*" the patented invention, "*without the consent, licence, or agreement,*" of the inventor, "*in writing, under*

his hand and seal, first had and obtained in that behalf."

The persons, for the time being, who have the legal estate, or interest, in the letters patent, are the only parties who can grant licences. A licence need not be by *deed*, to enable the patentee to recover the particular rent due under the licence; especially when a party has kept the licence, and used the invention down to a certain time (*Chanter* v. *Dewhurst*, 12 M. & W. 823; and see *Cutler* v. *Bower*, 17 L. J., Q. B., 217). But in case a person never accepted or enjoyed the use of the patent, the consideration for the licence is not recoverable, and the defendant may dispute the validity of the patent (*Chanter* v. *Leese*, 4 M. & W. 295).

To whom given.

Form of license.

Chanter v. *Dewhurst.*

Cutler v. *Bower.*

Chanter v. *Leese.*

In the case of *Hayne* v. *Maltby* (3 T. R., 438), there was no recital in the licence as to the validity of the patent, and on a demurrer to the defendant's plea, that the invention was not new at the date of the patent, judgment was given for him. This case was thus referred to by Lord Cottenham, L. C., in *Neilson* v. *Fothergill* (Webs. Cases, 290): "The case of *Hayne* v. *Maltby* appears to me to come to this — that although a party deal with a 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 dis-

Hayne v. *Maltby.*

Neilson v. *Fothergill.*

Neilson v. Fotheryill.

puting 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." And see *Pidding* v. *Franks* (18 L. J., Ch., 295).

Pidding v. Franks.

Bowman v. Taylor.

On the other hand, if a deed recite that the plaintiff had invented certain improvements in, &c., and had obtained letters patent for the same, and duly specified, &c., a defendant in an action upon such a deed will be estopped from disputing the validity of the patent (*Bowman* v. *Taylor*, 2 Ad. & El. 278).

Taylor v. Hare.

And under any form of the licence, money already paid for the use of an invention cannot be recovered. This was decided in the case of *Taylor* v. *Hare* (1 Bos. & Puller, N. Rep., 260). There the patent was voidable for want of novelty, and the action was for money had and received, to recover 425*l.*, paid on account of a licence granted by the defendant to the plaintiff. A verdict was found for the plaintiff, subject to the opinion of the Court, on the subsequent failure of the consideration. They nonsuited the plaintiff; and Sir James Mansfield, C. J., said:—"It is not pretended that any action like the present has ever been known. In this case two persons, equally innocent, make a bargain about the use of a patent; the defendant supposing himself to be in the possession of a valuable patent

right, and the plaintiff supposing the same thing. Under these circumstances, the latter agrees to pay the former for the use of the invention, and he has the use of it; *non constat* what advantage he made of it; for any thing that appears, he may have made considerable profit. These persons may be considered in some measure as partners in the benefit of this invention. In consideration of a certain sum of money, the defendant permits the plaintiff to make use of this invention, which he never would have thought of using had not the privilege been transferred to him. How then can we say that the plaintiff ought to recover back all that he has paid? . . . . . *Taylor v. Hare.*

Chambre, J.: The plaintiff has had the enjoyment of what he stipulated for, and in this action the Court ought not to interfere, unless there be something *ex æquo et bono*, which shows that the defendant ought to refund. Here both parties have been mistaken; the defendant has thrown away his money in obtaining a patent for his own invention; not so the plaintiff, for he has had the use of another person's invention for his money."

The licence may be to any number of persons, as it is not part of the letters patent, and is therefore not affected by the proviso, that if the letters patent should at any one time be vested in more than twelve persons or part-

ners, the patent becomes void (*Protheroe* v. *May*, 5 M. & W. 685).

The extent of a licence.

The licence may be for any portion of the term of fourteen years, and for any geographical portion of England and Wales, as well as for the whole term, and kingdom. And if the grantees of any number of licences, each being granted to a number of persons, were to coalesce and become jointly interested in such licences, the letters patent would not be invalidated under the above proviso (*Protheroe* v. *May*, 5 M. & W. 685).

Protheroe v. *May.*

Its usual conditions.

Where the licence is intended to apply only to a portion of the kingdom over which the right extends, as is frequently the case in granting licences to use patented machinery, a map should be added—distinctly pointing out the district in question. If the patentee agrees to grant no other licence for that district, it is called an exclusive licence; where there be no such understanding, it is called a common licence. But if the patent is for the production of a new article of trade or commerce, rather than for a method, and which article is likely to be produced in quantities, a schedule should be added containing a table of rent-charges, or royalties to be paid by the licensee to the patentee for so many hundred, or so many gross, or dozen, of the particular patented article he may manufacture; or in such cases, a written licence may be

greatly simplified, and the privilege to use the invention be conveyed by the patentee, by the sale of labels, at so much for a certain quantity, one to be attached to each article made according to the patent, and the sale of all others to be an infringement, as being without his consent. A preliminary agreement to grant a favourable licence to a party, making an advance to meet the expenses of experiments with a recently patented invention, may, in many cases, promote its success.

Its usual conditions.

Under any of these forms of licence, a premium as well as a rent, or royalty, is frequently paid, where the invention is likely to be very profitable; but it should be a fixed sum of money, or at least dependent upon the gross, and not upon the net receipts of the invention, or a partnership will be created.

Where a patent includes the subject-matter of one still in force, it can only be used under a licence from the owner of the older of the two patents (*Crane* v. *Price*, Webs. Cases, 413).

Crane v. *Price.*

A licence need not be stamped (*Chanter* v. *Johnson*, 14 M. & W. 411).

Chanter v. *Johnson.*

A licence transfers no portion of the legal estate or interest in the letters patent. It only gives a right to their use. The conveyance of the legal estate and interest, or some portion of it, may be effected under a variety of circumstances.

A licence conveys no part of the legal estate.

The assignment, whether of an equitable or

legal interest, and to whatever extent, should be by deed.

The usual objects of an assignment of letters patent.

From want of sufficient capital to obtain Scotch, or Irish, or foreign patents for an invention already patented in England, a patentee may be willing to part with a portion of the legal interest of his English patent to any one who will advance a sufficient sum of money for this purpose. Or, for the same reason, or from want of time and opportunity to work it to its full extent, he may be desirous to part with a portion of his legal interest to another as a partner, in consideration of an advance of capital, or to lease the whole legal interest for a rent or royalty, with or without a premium, or to part with it entirely by assignment for a gross sum, the interest conveyed including the whole term, or the whole kingdom, or only portions of both, or of either, as the case may be. And, lastly, he may mortgage the whole or any portion of his interest, either legal or equitable, where his want of capital is only temporary; or the letters patent may be assigned in trust for himself or others.

Mistakes to be avoided.

The following appear to be the chief mistakes to be guarded against in the transfer, either of an interest in letters patent, or of the letters patent themselves.

1st. The letters patent must not be vested in more than

1st. To avoid the forfeiture of the letters patent altogether, by dividing the estate or

interest therein amongst more than twelve persons at any one time, contrary to the following proviso, inserted in all letters patent. twelve persons.

—"Provided likewise, nevertheless, and these our letters patent are upon the express condition, that if at any time hereafter these our letters patent, or the liberties and privileges hereby by us granted, shall become vested in, or in trust, for more than the number of twelve persons, or their representatives, at any one time as partners, dividing or entitled to divide the benefits or profits, obtained by reason of these our letters patent (reckoning executors and administrators as and for the single person whom they represent, as to such interest as they shall be entitled to, in right of such the testator, or intestate); that then these, our letters patent, and all liberties and advantages whatsoever, hereby granted, shall utterly cease, determine, and become void, anything herein-before contained, to the contrary thereof in any wise, notwithstanding: Provided, that nothing therein contained shall prevent the granting of licences in such manner, and for such consideration, as they may by law be granted." The proviso.

It may be a useful precaution to insert, in an assignment of, or other instrument dealing with letters patent, a clause rendering the assignment void, *ipso facto*, immediately on the right or entire interest, becoming vested

in the manner forbidden by the above proviso.

2ndly. A partnership should be avoided.

2ndly. To avoid unintentionally creating a partnership, since this often leads to great loss and inconvenience, by rendering the party, who has merely advanced a sum of money for a share in the letters patent, liable to meet the engagements of other and less wealthy adventurers, although he may not have been acquainted with their proceedings. For any dealings by more than one person with letters patent, will involve a contribution of either capital or labour; and this, followed by a participation in profits, and a liability to losses, constitutes a partnership. The whole transaction is essentially a joint adventure or speculation.

The means of accomplishing this object.

This liability can only be avoided (unless a fixed sum is at once agreed upon), by making the rent or payment for a lease or assignment to depend upon, or be a per-centage upon the amount of sales, and not upon the net returns under the letters patent.

When an invention has been patented by a person not engaged in trade or business, or at least not in the particular trade to which the invention relates, the following will be found a safe and convenient arrangement:—

The owner of the patent should grant a lease of the then unexpired term, excepting the last day, to some two or three men of business on whom he can rely. The rent reserved

being some portion, for instance, thirty-seven fortieths of the gross, as distinguished from net annual receipts, for all licences to be granted by the lessees of the letters patent. The three-fortieths would belong to the lessees, as a remuneration for their trouble and to meet the expenses of management.

The means of accomplishing this object.

The lessees should covenant to keep an account of the licences granted, and the amount to be received under each, verified by letters and other documents open to the inspection of the lessor at some assigned place of business. These accounts, if not objected to within a given time, to bind both parties.

That the lease should become forfeited on non-payment of rent, or non-performance of the covenants, after certain notice.

That each licence should be drawn in the particular form, and subject to the several reservations provided by the lease, and contain a condition or proviso for vesting all the right and claim to the rents or royalties of each licence, from and after the expiration or sooner determination of the lease, in the person or persons for the time being entitled to the letters patent.

Such an arrangement has the advantage of making the benefit of the patentee's ingenuity depend upon the progress of his invention, instead of upon its profits; thereby avoiding the liability of a partnership and the insolvency of

The means of accomplishing this object.

licensees. At the same time it obviates the necessity of a fixed rental, which may be attended with the inconvenience of being either too high or too low, till the success of the adventure can be ascertained. If too high, the progress of the invention is retarded; if too low, and the invention succeed, the patentee fails to obtain the amount of benefit to which he is justly entitled. This assignment by way of lease, as it may be fitly called, enables the owner to come into possession of his old estate on the failure of any of the covenants, and to grant another lease to other and more effective managers, without any litigation or detriment to his property; which is a far better and more convenient way of enforcing and realizing his rights than by distraint for rent, or by any form of action.

Ridgway v. *Philip.*

Where a party has only a licence, but at the same time interferes in the general working of the patent, it will be a question for a jury whether, from the facts, he is or is not a partner with the patentee (*Ridgway* v. *Philip*, 1 Cr. M. & R. 416).

Elgie v. *Webster.*

Where a sum of money was advanced to perfect certain inventions, on the promise that if they proved profitable, one-third of the profit should go to the party making the advance; the Court said there might be a question whether a partnership was not created by the agreement as to subsequent property. But the express promise to pay this

specific sum at all events, takes away the objection of that forming a part of any partnership fund (*Elgie* v. *Webster*, 6 M. & W. 518).

3rdly. The instrument should prevent disputes in the event of the letters patent being repealed by *scire facias*.

3rdly. To provide that the instrument shall not fail, either from its character or structure; to prevent disputes arising in consequence of the subsequent discovery of the invalidity of the letters patent. This precaution is required by the nature of the property transferred, which is always liable to be cancelled by proceedings under a writ of *scire facias*. It is, therefore, only fair that those who share the advantages of a patent should take part of the hazard inseparable from such property. If the instrument conveying the interest in question is rightly drawn, this object will be obtained, and the assignee, or any other party claiming an interest in letters patent, will not be able to fall back upon the party from whom he received his interest, in case the letters patent should at any time be cancelled, as long as the transaction is untainted with fraud. The instrument should be a deed, and not merely a simple contract or agreement, otherwise there will be no estoppel between the parties, and the payment of an annuity, or rent, or other sum of money, will be barred by a partial failure of the consideration. The parties to a deed are estopped, or prevented denying the facts thereby admitted, either in the body of the deed or by the recitals,

Hayne v. *Maltby.*
Bowman v. *Taylor.*
Lawson v. *Tremere.*

the doctrine of Lord Coke's, that you cannot have an estoppel by recital, being now exploded (*Hayne* v. *Maltby*, 7 T. R. 438; *Bowman* v. *Taylor*, 2 Ad. & E. 278; *Lawson* v. *Tremere*, 1 Ad. & E. 792). And the consideration is only assailable on the ground of illegality; as, for instance, where the title to the letters patent has become vested in more than the limited number of persons (*Duvergier* v. *Fellowes*, 10 B. & C. 826; and on appeal to the House of Lords, 6 C. & F. 89).

Duvergier v. *Fellowes.*

Form of the deed.

The deed should recite that the patentee or grantor conveying had invented certain improvements, or whatever the invention may be, and had obtained her Majesty's Letters Patent for the sole use of this invention; and the grantee having executed a deed with such a recital, will be estopped from disputing the essential elements of the title, such as the utility, or novelty, or originality of the invention. And he will be also estopped where there is no such recital, if the general character of the deed implies that he had assented to the validity of the patent (*Oldham* v. *Langwood*, cited by Lord Kenyon, C.J., in *Hayne* v. *Maltby*, 3 T. R. 439). And no fault in the instrument or deed will enable a party to recover money already paid upon the patent proving to be invalid (see *Taylor* v. *Hare*, 1 B. & P., N. R. 260). But where there has been fraud or misrepresentation, a court of law will

Oldham v. *Langwood.*

Taylor v. *Hare.*

set aside an agreement made under such circumstances, and will order any money already paid to be refunded (*Lovell* v. *Hicks*, 2 Y. & C. 46, 472). *Lovell* v. *Hicks.*

If there has been no fraud, and the parties are estopped by their deed from considering the validity of the patent, although it may be clearly voidable, they will still continue liable upon its covenants. Under these circumstances, proceedings should be taken under a writ of *scire facias* to repeal the letters patent, and an application then made to the Court of Chancery to get the deed cancelled. When the patent is nearly valueless, but not voidable, the Court of Chancery will not relieve from an unfortunate bargain, if untainted by fraud. Relief in the Court of Chancery.

Lastly. The legal or equitable estate or interest in letters patent may change hands without the agency of the owner. Being personal estate, they may become liable to his debts under an execution, or pass to his assignees under an insolvency or a bankruptcy, or to his executors or administrators by the express words of the grant. Under any of these circumstances, the letters patent are said to pass by operation of law, and such a transfer is not within the proviso against their vesting in more than a certain number of persons at any one time (*Bloxam* v. *Elsee*, 6 B. & C. 169). The legal estate or interest in letters patent will pass *Bloxam* v. *Elsee.* Letters patent may pass by operation of laws.

Hesse v. *Stevenson.*

to the assignees of the owner as long as it is under his disposition, but any scheme or invention a man may have in prospect, and not patented before he obtains his certificate, does not pass (*Hesse* v. *Stevenson*, 3 Bos. & Pull. 577).

CHAPTER IV.

ON THE INFRINGEMENT OF A RIGHT SECURED BY LETTERS PATENT.

Definition of an infringement.

AN infringement of letters patent for an invention, is an invasion of the property of the person to whom they belong, or of any one who has an interest therein (*George* v. *Beaumount*, 27 Rep. Arts, 2nd Series, 252): and the owner or licensee of letters patent can maintain an action against an infringer of the right thereby secured. Any one interested in letters patent may be obliged to answer every objection to the validity of this description of property before he can recover damages. He must not only produce an authenticated account of his invention or of the boundaries of his claim, and show that he is in legal possession of the letters patent, and that the defendant has been guilty of an infringement, —all this is of course indispensable to decide whether there has been an invasion or not; but he must also be prepared, if the infringer choose to put him to the proof, to sustain the *inquiry much further, although the effect of* the action is not, as in proceedings by *scire facias*, finally to decide his right to the exclusive privileges granted by the letters patent,

Definition of an infringement.

but solely to determine the question of some individual and particular interference with that right. Thus, although a party entitled to maintain an action for an infringement of letters patent shall have proved his interest in them (if he be not the patentee), and proved the identity of the two inventions in question, and therefore made out a *primâ facie* case, the infringer may put in issue, or compel the plaintiff to make out and fully defend every essential of the consideration of the grant discussed in the first two chapters of this work, and to trace with perfect accuracy, (in case he is not the patentee,) the devolution of his interest as prescribed and considered in that just concluded. And if the plaintiff should fail in these particulars, although it may be quite clear that an act of aggression has been committed, he will have no redress. So that the question of an infringement or not is generally much more extensive than it would at first appear. It may become *the test*, in each case, for ascertaining whether the principles and rules considered in the preceding pages have been rightly applied.

Its application.

In order to learn whether any particular act is an infringement of a patent, a comparison must be instituted between the *manufacture* complained of and the invention claimed in the specification. Whether the character of the utility is the same in both, or whether it is the

same in spirit or substance with the patented invention. Its application.

The examples under these heads, collected in the first chapter, *ante*, pp. 38-56, arose out of the discussion of particular cases of infringement, and may therefore be referred to with advantage on the subject of this chapter.

It is only where a patentee complains of the interference of another party with his rights that his claim is likely to be investigated, and a court of law called upon to decide *what may* and *what may not* be patented. These cases therefore incidentally discuss the question of infringement, which, in its primary and simplest form, is little more than *a matter of comparison*, and to which object the decisions or examples arranged in this chapter should be strictly confined. They will show the principles and nicieties of construction laid down by the courts of law in prosecuting *such comparisons*, that is, in deciding questions of infringement so far as they depend upon the language of the specification.

Where the invention patented is some new product, the impossibility of producing which, except according to the patent, may be sufficient proof of the invasion complained of; or in the case of a comparison of two machines, there may be little difficulty. But when the alleged infringement is the application of some comprehensive idea, and the spirit or substance of the invention as it appears upon the specification

Its application.

has to be determined, considerations of great perplexity and difficulty arise; both in fixing the boundaries of the invention and in deciding what amounts to a colourable evasion of the inventor's rights.

The consideration of the words of the grant.

Before entering more particularly into the nature of an infringement or of what amounts to an invasion of the right of the owner of an interest in letters patent, it is desirable to consider the words of the letters patent.

In the granting portion—they are to "*make, use, exercise, and vend*" the patented invention, and those in the prohibiting portion are that none except the patentee "*do make, use, or put in practice.*" These words collectively may be said to constitute the words of the grant.

"*Make.*"

It has been decided that merely to "*make*" a patented invention during the patent, unless for amusement or for a model, is an infringement.

Jones v. *Pearce.*

In the case of *Jones* v. *Pearce* (Webs. Cases, 125), Mr. Justice Patteson, in reply to a question from the jury as to whether there was any evidence of the defendant having used or sold the wheels (the invention in question), said that "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."

A similar construction would no doubt be put upon the words "*use*" and "*exercise*," and an entirely private use, and only from curiosity or for amusement, would not be held an infringement. But the sale of an article exactly the same as described in a patent, will amount to a use, and constitute an infringement (*Gibson* v. *Brand*, Webs. Cases, 630).

"*Use*" and "*exercise*."

Gibson v. *Brand*.

An *exposure to sale* of a patented article is not within the meaning of the words vend or put in practice, or in any way an infringement. This was laid down in the case of *Minter* v. *Williams*, (Webs. Cases, 137,) by Mr. Justice Coleridge. "In the granting part of this patent the words are 'make, use, exercise, and vend;' and then in the prohibiting part the words are rather different, for an obvious purpose; they are 'make, use, or put in practice.' Now we are to see whether this count, either referring to the granting or prohibiting part, necessarily imports an offence. The words of the count are, that the defendant did 'wrongfully and unjustly expose to sale,' &c.; and it is said these words necessarily import a vending within the granting part of the patent. It is argued, that an exposing to sale is included within the meaning of the word, vending'; but even upon that construction the count would be defective, inasmuch as the evidence, instead of the words of the patent, is

Exposure to sale not an infringement.

Minter v. *Williams*.

Minter v. Williams.

put upon the record. It seems to me, that 'vending' imports the habit of selling, and 'selling' the act of sale. If we read the word 'vend' as expressly inserted in the prohibitory part of the patent, we ought only to give it there the meaning which would effectuate the purpose of the patent—the prevention of acts injurious to the patentee, with as little restraint on the public as possible. It must be taken here that the defendant has only exposed to sale; that whatever may have been his original purpose in so doing, or whatever motive has superseded, he has abstained from selling. Now, I cannot say that such a mere exposure to sale is necessarily injurious to the patentee; it may, on the contrary be very beneficial; it is not, therefore, necessarilythe vending which is exclusively granted to him. As to the 'using and exercising,' those words cannot be fairly resorted to, when we find with them the word 'vending,' and that is passed by. But if they could, the argument would be the same: this might be an innocent using and exercising, and so not prohibited."

A patent protects its subject-matter, and no more.

The act of infringement by a sale must relate distinctly to the subject-matter of the particular patent in question; and the patentee or his assigns can claim no more than is there granted. If it be for the manufacture and sale, for instance, of some article, when it has been once sold, the patentee or owner of the

letters patent has obtained his reward, and any subsequent sale is perfectly free; or if the subject-matter be a particular machine, or a process, or method, a sale confers an absolute control of the thing sold, and the full right to its unrestricted use and enjoyment. A licensee going beyond the terms of his licence, is of course as liable to the owner of the patent as a stranger.

A colourable imitation, such as the substitution of some mechanical equivalent in the patented invention to deceive the eye, or any inroad upon the spirit or substance of the invention claimed by the patentee, will be held an infringement. The concluding prohibitory words of the letters patent are, "*nor in anywise counterfeit, imitate or resemble the same* (invention), *nor shall make or cause to be made any additions thereunto or subtraction from the same, whereby to pretend himself or themselves the inventor or inventors, deviser or devisers thereof.*"

A colourable imitation forbidden.

In the case of *Hill* v. *Thompson*, (Webs. Cases, 242,) Dallas, C. J., said, "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 different."

Hill v. *Thompson.*

In *Morgan* v. *Seaward* (Webs. Cases, 171) the patent was, amongst other inventions, for

Morgan v. *Seaward.*

Morgan v. *Seaward.*

an improvement in paddle-wheels, whereby the float-boards or paddles are made to enter and come out of the water in positions best adapted to give effect to the power applied; and Alderson, B., in directing the jury respecting the fact of infringement, said:—"Upon that subject the question would be simply whether the defendant's machine was only colourably 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 plaintiffs really is, and what the machine of the defendants 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 infringed the patent. You will, however, when you are considering that sub-

ject, 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 plaintiff's; 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 plaintiff's 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*." *Morgan v. Seaward.*

In the case of *Barber* v. *Grace* (7 L. J., Ex. 122), the invention claimed consisted of a mode of submitting hosiery and similar goods, made of elastic cotton fabrics, to the finishing process of a press, worked either by a screw or hydraulic power. The machine consisted of two cast-iron boxes filled with steam, between the heated surfaces of which the goods were introduced and subjected to pressure. The machine used by the defendant, and which was complained of as being an infringement of the plaintiff's patent, consisted of a set of rollers heated by steam, and furnished with pipes and cocks to allow the circulation of the steam therein. Woollen fabrics, similar to those of the plaintiff, were subjected to pressure by the action of these rollers. Under these circum- *Barber v. Grace.*

Barber v. Grace.

stances, it was contended, on behalf of the plaintiff, that the defendant had been guilty of an infringement of the plaintiff's patent, inasmuch as the specification included the rollers used by the defendant.

The jury returned a verdict for the defendant, and Pollock, C. B., on refusing a rule for a new trial, said, "The real question arises upon the meaning of the specification; whether it includes a pressure by rollers filled with steam. In my opinion cylinders were not dreamt of by the inventor in this case, and certainly were not used by him. There has been a discovery in this case, and the cylinder has been subsequently adopted; but if we were to hold that cylinders were within this patent, the patentee might perhaps enjoy his exclusive right for fourteen years, and the public would remain in ignorance that cylinders could be employed for the same purpose. The question is, whether cylinders are included or contemplated in this specification? The specification at first states in general language the effect of the patent, giving but little information; but it afterwards proceeds to a more particular description of the machine, and it then states the invention to consist in placing stockings between *hot boxes* in a single layer, and then causing the *boxes* to press the same between them for about three minutes. The patentee then goes on to observe, that

there exists an invention not altogether unlike it; but that what he claims is the submitting of hosiery and other articles to the pressure of hot *boxes or surfaces* heated by steam, hot water or other fluid, as above described. The meaning of that is, that the surface is the operative part, not that the box produces the effect. The patentee then says, 'I do not therefore claim the finishing of such goods by heat generally.' He mentions various modes, but does not suggest that cylinders are capable of being used. The drawing exhibited shows an hydraulic press, pressing upwards a box filled with steam or hot water, and the object is to subject the articles placed between these *hot boxes* to a continuous and not to a variable pressure. I think, therefore, that the word '*boxes*' in this specification, explained as it is by the print annexed, does not include cylinders. The case might have been that the cylinder was obviously within the description, so that the jury could have said that the patent had been infringed by the defendant; but that was not the case here, for the jury found that the invention was not *colourable*, and I must say I am satisfied with their verdict. *Harber* v. *Grace.*

"Alderson B.:—The patentee describes his invention both at the beginning and at the end of his specification, and claims for a patent which produces a particular description of pressure. But I admit he would not be bound

Barber v. Grace.

by an exact description, and a mere *colourable variation* would amount to a violation of the patent. The plaintiff's press squeezes together substances at the same time equally. A machine may press hosiery goods either for a long or for a short time. The point then is, whether the jury ought to have found that it was no infringement of the plaintiff's patent to place hosiery goods between rollers which did not press all parts of them at the same time, but successively. Rollers only press on the same part for a single moment. In my opinion the jury were warranted in saying that there had been no infringement, and they would have formed a wrong conclusion had they said otherwise."

Electric Tel. Comp. v. Brett.

In the case of *The Electric Telegraph Company* v. *Brett and Little* (not yet reported), the patent chiefly relied upon by the company was granted in 1837, to Cooke and Wheatstone, "for improvements in giving signals, and sounding alarms in distant places, by means of electric currents transmitted through metallic circuits." At the trial, several questions were submitted to the jury by the learned judge, Wilde, C. J., subject to leave to move on the part of the defendants. And Cresswell, J., on delivering the judgment of the Court, having disposed of several of the special matters found by the jury, and of the objections raised by the defendants, said: "Of

these objections, the one mainly relied upon was, the plaintiff's specification would protect the improvements of the patentees, only when such improvements were applied to metallic circuits, and that there would be no infringement of such improvements if the electric current, acting on the improved machinery, were not wholly transmitted through a metallic circuit. And as the defendants' electric current was not wholly transmitted through a continuous metallic circuit, but (provided it were less than half of the whole current) by using the earth as the connection between two portions of metal, that it was no infringement. This was a grave objection; but the Court was of opinion, after full consideration, that it ought not to prevail. It appeared that at the time of the grant of the patent, the transmission of electric currents through metallic circuits was known; and also, that the power of the current might be increased by coils in the wire, and that after the grant it had been discovered that a large portion of the wire might be dispensed with, by plunging the two ends of the wire in the earth, so that a circuit on this principle would not be wholly metallic. Now the patentees did not claim the invention of metallic circuits, but only improvements in methods for using the currents, assuming it to be transmitted by means which were open to the public. The circuit used by

Electric Tel. Comp. v. *Brett.*

Electric Tel. Comp. v. *Brett.*

the defendants was metallic in all that operated in giving signals, and in all the parts to which the plaintiff's alleged improvements applied; and it was not a necessary condition, that the circuit should be metallic in any other part than that which contained the coils and operated on the needles. The objection might be considered as it regarded the specification, and as regarded the title of the patent. As to the first, the part which described the matters claimed was to be more strictly construed than that not spoken of as the subject of the grant, but only as something known, but necessary to be referred to for the sake of explanation. In this view, the Court thought the specification comprehended all circuits that were metallic, as far as it was material to the improvements claimed that it should be so, and that the expression was not to be construed with more strictness than was necessary to fulfil the purpose of explanation for which it was introduced. With regard to the use of the words "metallic circuits" in the title of the patent, it appeared to the Court, that the title did, in the actual circumstances of the case, give sufficient notice to any person acquainted with that discovery, or thinking it probable that such a discovery might be made, and having also invented improvements like those of the patentees, to put him on his guard; and upon inquiry how far the proposed patent

might interfere with him. The Court thought it reasonable to hold, that a claim for a patent for improvements in the mode of doing something by a *known process*, was sufficient to entitle the claimant to a patent for his improvement when applied either to *the process as known at the time of the claim*, or to the same process *altered and improved* by discoveries not known at the time of the claim, so long as it remains identical with regard to the improvements claimed by the patent. *Electric Tel. Comp. v. Brett.*

Where a person unintentionally uses a patented process, and has no means of knowing the fact of similarity between the two, he will not be held guilty of an infringement. The unintentional use of a patented process not an infringement.

In *Heath* v. *Unwin* (13 M. & W. 583), the patent is for "certain improvements in the manufacture of iron and steel." The chief claim in the specification is for "the use of *carburet of manganese* in any process for the conversion of iron and steel." Carburet of manganese is a metallic substance compounded of black oxide of manganese and carbon. The mode of manufacturing steel used long before the plaintiff's patent, appeared to be as follows:—Bars of iron are piled upon each other in a furnace, with layers of charcoal between them; the furnace is then heated, and kept in a heated state for several days; at the end of which time, the bars are taken out, and having imbibed the carbon, are converted into steel, *Heath* v. *Unwin.*

Heath v. *Unwin.*

which is called "blistered steel." This substance is then placed in a crucible, in small pieces, and again subjected to heat, and so undergoes a second process of casting. It was considered, that the steel was further improved in quality by imbibing a portion of carbon from the crucible, which was lined with carbonaceous matter. Black oxide of manganese was also introduced into the vessel for the purpose of assisting in the decarburation; due attention being always paid to the respective quantities of the carbon and the oxide, as too much of the former would render the steel brittle, and too much of the latter would destroy the crucible. The defendant, after the date of the plaintiff's patent, in manufacturing cast steel, put blistered steel into a crucible together with certain proportions of black oxide of manganese and of carbon. Scientific witnesses deposed that these substances would become fused at a certain temperature; and when in a state of fusion, from the affinity of the oxide for the carbon, would combine and form the *carburet of manganese*; and before the blistered steel could be operated upon by them, it would require to be also reduced to a state of fusion by a much greater heat. The plaintiff contended that this process amounted to an infringement of his patent; since, as the carbon and oxide of manganese by their combination formed a *car-*

buret of manganese before they acted upon the steel, it was in all respects the same, as if the defendant had in the first instance introduced *carburet of manganese* into the crucible in its compound form. *Heath* v. *Unwin.*

Parke, B., on delivering the judgment of the Court on a rule to enter a verdict for the defendant, commenced by reading the following portion of the specification: "'I propose to make an improved quality of cast steel, by introducing into a crucible bars of common blistered steel, broken as usual into fragments, or a mixture of cast and malleable iron, or malleable iron and carbonaceous matters, along with from one to three per cent. of their *weight of carburet of manganese*, and exposing the crucible to the proper heat for melting the materials, &c.; but I do not claim the use of any such mixture of cast and malleable iron, or malleable iron and carbonaceous matter, as any part of my invention; but only the use of *carburet of manganese* in my process for the conversion of iron into cast steel.' And in summing up his claims he states one of them (the third) to be the employment of *oxide of manganese alone in the puddling of cast iron*, and the fourth (the one in question) the employment of *carburet of manganese* in preparing an improved cast steel. This substance is metallic and formed by the fusion of black oxide of manganese with carbonaceous matter.

Heath v. *Unwin.*

"Upon the trial it appeared that the defendant never used carburet of manganese, by putting any of that substance into the crucible, but he placed the black oxide and carbonaceous matter in the crucible, and some scientific witnesses who were examined, gave their opinion, that those two substances would form, during the process of conversion, and before actual union with the melted steel, *carburet of manganese* in a state of fusion; and the jury found that supposition to be true; but also found that the quantity of the carburet so formed would be less than one per cent. of the weight of the steel in the crucible.

"Upon these facts the question arose whether the defendant was guilty of an infringement of the plaintiff's patent.

"In order to decide this we must first determine for what invention the patent, as explained by the specification, is taken out.

"It is not for the use of oxide of manganese in the melting of cast steel, for the carburet of manganese is expressly mentioned, and distinguished from oxide of manganese; nor could the patent for the use of the oxide have been supported, as the substance had been used long before in the process of melting steel. Nor is it for the use of oxide of manganese in *any* mode of combination with carbon generally. If it had been it would have been liable to a similar objection, as oxide of man-

ganese had been used in crucibles, containing in their construction a quantity of carbonaceous matter, with a portion of which it would necessarily combine during the process. Nor is it for the use of the oxide with such a quantity of carbon as would deoxidate it, and leave the manganese alone to operate upon the steel, so that neither the quality of the steel be altered, nor the crucible destroyed by the oxide of manganese, abstracting, as it otherwise would do, some quantity of carbon from them. The patent is obtained for the use of one peculiar combination of carbon and manganese, the metallic substance called *carburet of manganese*, and for the use of it *in that state*. The specification is expressly for the employment of carburet of manganese, and the mode of using it is by putting a certain quantity, by weight, of that substance in an unmelted state into the crucible. *Heath* v. *Unwin.*

"This being in our opinion the true construction of the specification, it is clear that the defendant has not directly infringed the plaintiff's patent, for he has never used that substance in the mode described in the specification.

"Then comes the question whether he has indirectly infringed the patent by *imitating and using* the same process substantially, but making a *colourable variation*.

"Now there is no doubt, we think, if a de-

Heath v. *Unwin.*

fendant substitutes for a part of the plaintiff's invention, some well-known equivalent, whether chemical or mechanical, he would probably be considered as only making a colourable variation. But here he has not done so. It is quite clear upon the evidence that the defendant never meant to use the carburet of manganese at all: he certainly never knew, and there is no reason to think that prior to this investigation any one else knew, that the substance would be formed in a state of fusion, and it is mere matter of speculative opinion (though after the verdict, we must assume it to be a correct opinion) amongst men of science, that it would; but it was clearly not an ascertained, and still less a well-known fact. There was therefore no intention to imitate the patented invention, and we do not think the defendant can be considered to be guilty of an indirect infringement, if he did not intend to imitate at all" (*Contra,* see *Heath* v. *Unwin,* 16 L. J., Ch. 284).

The use or sale of any portion of the subject-matter of a patent is an infringement.

Gillett v. *Welby.*

Where there are several improvements or inventions included in one grant, it is not necessary that each of them should have been used or sold, to constitute an infringement of the patent. Coltman, J., in *Gillett* v. *Wilby* (Webs. Cases, 271), said: "It is true, that the plaintiffs must make out to your satisfaction that the whole of the improvements were new, and that some of them have been pi-

rated. It is not necessary that they should all have been used, but they must be shown to be all new; and if they are all new, and the *defendant has infringed any* one of them, it will be sufficient to support the action, and *it is not necessary he should have infringed them all.*" *Gillett* v. *Welby.*

In *Jones* v. *Pearce* (Webs. Cases, 124), the invention infringed was the construction of carriage wheels, so that the weights they have to carry were suspended by iron rods from that part of the wheel which happened to be uppermost, instead of resting upon the lower spoke as in an ordinary wheel. Patteson, J., said: "It seems the defendant has constructed a wheel whose construction is on the suspension principle; that alone would not make it an infringement of the plaintiff's patent, because the suspension principle might be applied in various ways; but if you think it *is applied in the same way*, as according to the plaintiff's patent it is applied, then the *want of two or three circumstances in the defendant's* wheel, which are contained in the plaintiff's specification, would not prevent the plaintiff's recovering in this action for an infringement of his patent. *Jones* v. *Pearce.*

And again, in *Crane* v. *Price and others* (4 M. & G. 606), it was held, that an infringement had been made out, as it clearly appeared in evidence that the defendants had *Crane* v. *Price.*

Crane v. *Price.*

used, *either in part or in whole*, the construction described in the specification of the plaintiff's patent. But the part of the invention said to be infringed must be material, and of the essence of the invention claimed.

5 & 6 Will. 4, c. 83, s. 7.

The use of the words "*patent*," "*letters patent*," or "*by the King's patent*," except by a patentee, is forbidden by 5 & 6 Will. IV. c. 83, sect. 7: "And be it enacted, that if any person shall write, paint, or print, or mould, cast, or carve, or engrave, or stamp upon anything made, used, or sold by him, for the sole making or selling of which he hath not or shall not have obtained letters patent, the name or any imitation of the name of any other person, or hath or shall have obtained letters patent for the sole making, using, and vending of such thing, without leave in writing of such patentee or his assigns; or if any person shall upon such thing, not having been purchased from the patentee or some person who purchased it from or under such patentee, or not having had the license or consent in writing of such patentee or his assigns, write, paint, print, mould, cast, carve, engrave, stamp, or otherwise mark the word 'patent,' the words 'letters patent,' or the words 'by the King's patent,' or any words of the like kind, meaning, or import, with a view of imitating or counterfeiting the stamp, mark, or other device of the patentee; or shall in any other manner imitate

or counterfeit the stamp or mark or other device of the patentee, he shall for every such offence be liable to a penalty of fifty pounds, to be recovered by action of debt, bill, plaint, process, or information, in any of his Majesty's Courts of Record at Westminster, or in Ireland, or in the Court of Session in Scotland, one half to his Majesty, his heirs and successors, and the other to any person who shall sue for the same; provided always, that nothing herein contained shall be construed to extend to subject any person to any penalty in respect of stamping or in any way marking the word 'patent' upon anything made for the sole making or vending of which a patent before obtained shall have expired." 5 & 6 Will. 4, c. 83, s. 7.

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