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J. H. JOHNSON, SOLICITOR, ASSOC. INST. C.E.

AND

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J. H. JOHNSON, SOLICITOR.

ST. JOHN V. DAY, C.E.



Johnson, James, of the Middle Temple

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PATENTEE'S MANUAL

BEING

A TREATISE

ON THE

LAW AND PRACTICE OF LETTERS PATENT

ESPECIALLY INTENDED FOR THE USE OF

PATENTEES AND INVENTORS

BY

JAMES JOHNSON

OF THE MIDDLE TEMPLE, BARRISTER-AT-LAW

AND

J. HENRY JOHNSON, ASSOC. INST. C.E.

SOLICITOR AND PATENT AGENT, LINCOLN'S-INN FIELDS, AND GLASGOW

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PREFACE TO THE SECOND EDITION.

IN PREPARING the Second Edition of this little work for the press, the whole has been subjected to very careful revision. The latest Statutes and Decisions of the Courts have been noticed in the proper places, and several new Chapters on matters not touched upon in the First Edition have been added. The work in its present shape is consequently much longer, and, it is to be hoped, more useful than in its previous form. Moreover, an entirely new feature appears in the present edition, viz., a summary of the Patent Laws of various foreign States, and such of our Colonies as possess Patent Laws of their own.

PREFACE TO THE THIRD EDITION.

A THIRD EDITION of this work having been called for, the whole has been again subjected to careful revision, and the latest Decisions of the Courts have been noticed in their proper places. Additions have also been made to the Acts of Parliament and Abstracts of Foreign Patent Laws placed in the Appendix.

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B. & C.	Barnewall & Cresswell's Reports
Bea.	Beavan's Reports
B. & S., or Best & Sm.	Best & Smith's Reports
Bing. N. C.	Bingham's New Cases
Bos. & Pul.	Bosanquet & Puller's Reports
C. B.	Common Bench Reports
C. B. n. s.	Common Bench Reports, New Series
C. & K.	Carrington & Kirwan's Reports
C. & P.	Carrington & Payne's Reports
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Ell. Bl. & Ell.	Ellis, Blackburn & Ellis' Reports
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Eq. Rep.	Equity Reports
Exch. Rep.	Exchequer Reports
Giff.	Giffard's Reports
H. Bl.	H. Blackstone's Reports
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ADDENDA.



- Page 22, line 21, *add*—See also *Dangerfield v. Jones* (13 L.T., N.S. 142).
- „ 61, *add to foot-note*—See the remarks of Wood, V.C., on *Jones v. Pearce* in *Tangye v. Stott* (Weekly Notes, vol. I., p. 68; S.C., Pract. Mech. Jour. vol. i., 3rd ser., p. 365).
- „ 96, line 19, *add*—Any part of the provisional specification may be omitted in the complete specification, if there be no fraud, and the effect of the remainder is not altered by the omission. (*Thomas v. Welch*, 1 Law Rep., C.P. 192).
- „ 116, „ 19, *add*—In *Thomas v. Welch* (1 Law Rep., C.P. 192), it was held that all the claiming clauses may be struck out by disclaimer, if there remain sufficient in the body of the specification to distinguish the invention.
- „ 133, „ 18, *add*—*Thomas v. Welch* (1 Law Rep., C.P. 192).
- „ 183, „ 10, *add*—*Dangerfield v. Jones* (13 L.T., N.S. 142); *Thomas v. Welch* (1 Law Rep., C.P. 192).
- „ 148, „ 8, *add*—But this will not be done after undue lapse of time. (*Re Blumond*, 3 L.T., N.S. 800.) Whether the Lord Chancellor has power under 15 & 16 Vict. c. 83, s. 15, to correct clerical errors *quære* (*ibid.*).
- „ 155, „ 10 from bottom, *add*—All the claiming clauses may be struck out by disclaimer, if there remain in the body of the specification sufficient to distinguish what the invention is (*Thomas v. Welch*, 1 Law Rep., C.P. 192).
- „ 156, „ 11 from bottom—*Ralston v. Smith* is now reported: 11 H.L.C. 223.
- „ 172, „ 17, *add*—When a prolongation of a patent term has once been granted, the jurisdiction of the Judicial Committee is exhausted, and they have no power to entertain an application for a further extension. (*Goucher's Patent*, 2 Moore, P.C.C., N.S. 582.)
- „ 183, „ 8 from bottom, *add*—But after the determination of the license, a licensee is not estopped from contesting the validity of the patent. (*Dangerfield v. Jones*, 13, L.T., N.S. 142.)
- „ 193, „ 11 from bottom, *add*, after the reference,—*Bovill v. Crate* (1 Law Rep., Eq. 388).
- „ 197, „ 14, *add*—Particulars of objections, stating the use of the alleged invention, 'in the following among other instances,' were held sufficient; but the insertion of such words is in general undesirable. (*Penn v. Bibby*, 1 Law Rep., Eq. 548.)
- „ 198, note,—*Bovill v. Crate* is now reported: 1 Law Rep., Eq. 388.
- „ 220, line 6 from bottom, *add*—A patentee who has once obtained this certificate may have his full costs in any subsequent action for infringement, even although the validity of the patent may not have been questioned in such action. (*Davenport v. Rylands*, 1 Law Rep., Eq. 308, S.C. 85, L.J., N.S., Ch. 204).
- „ 235, for 15 and 16 Vict., ch. 115, *read*—16 and 17 Vict., ch. 115.

THE LAW

OF

PATENTS FOR INVENTIONS.

CHAPTER I.

PRELIMINARY.

THAT the Crown has the power, in certain cases, of granting to inventors the privilege of a monopoly in working their inventions for a certain number of years, is probably known to every reader before he opens this volume. During that period the entire community is precluded from making use of the invention, except by the permission of the inventor, or the person representing him; the law declaring that the privileged person shall derive the exclusive benefit, whatever that may be, of the invention for the specified time.

This privilege is secured to the inventor by letters patent passed under the Great Seal, and the person to whom the privilege is granted is termed in common parlance the patentee.

For the purposes of the present treatise, there is no need that we should enter upon any historical disquisition as to the common-law right of the Crown in matters of patent privileges. It will be sufficient to state that the right of the Crown to grant privileges

by letters patent to subjects obtaining its favour, was exercised in very early times, and it was only disputed when exclusive rights to sell various commodities, such as salt, iron, and coal, had been granted to certain persons, to the great grievance of their fellow-subjects, and to the oppression of trade. The Statute of Monopolies passed in the twenty-first year of James I., was levelled at the abuses which an undue exercise of prerogative had produced, and being, says Sir Edward Coke, forcibly and vehemently penned for their suppression, cut off all claim on the part of the Crown to the right of granting monopolies and exclusive privileges, whereby the subjects of the realm could be aggrieved and inconvenienced.*

* 'The King had undoubtedly, by the ancient laws of the realm, large powers for the regulation of trade: but the ablest judges would have found it difficult to say what was the precise extent of those powers. . . . In addition to his undoubted right to grant special commercial privileges to particular places, he long claimed a right to grant special commercial privileges to particular societies and to particular individuals; and our ancestors, as usual, did not think it worth their while to dispute this claim till it produced serious inconvenience. At length, in the reign of Queen Elizabeth, the power of creating monopolies began to be grossly abused; and as soon as it began to be grossly abused, it began to be questioned. The Queen wisely declined a conflict with a House of Commons backed by the whole nation. She frankly acknowledged that there was reason for complaint: she cancelled the patents which had excited the public clamours; and her people, delighted by this concession and by the gracious manner in which it had been made, did not require from her an express renunciation of the disputed prerogative. The discontents which her wisdom had appeased were revived by the dishonest and pusillanimous policy of her successor, called King-craft. He readily granted oppressive patents of monopoly. When he needed the help of his Parliament, he as readily annulled them; and as soon as the Parliament had ceased to sit, his Great Seal was put to instruments more odious than those he had recently cancelled. At length that excellent House of Commons which met in 1623, determined to apply a strong remedy to the evil. The King was forced to give his assent to a law which declared monopolies established by royal authority to be null and void.' (Macaulay's History of England, iv. 127.)

That statute (*see the Appendix*) declared that all monopolies, grants, and letters patent, for the sole buying, selling, making, working, or using of anything within the realm, were contrary to the laws, and void. But it excepted from the operation of this enactment all letters patent and grants of privilege of the *sole working or making of any manner of new manufactures which others at the time of making such letters patent and grants should not use*, so they be not contrary to law, nor mischievous to the state, by raising prices of commodities at home, or hurt of trade, or generally inconvenient. It was afterwards declared that these excepted grants of privilege should have the same validity that they had previous to the passing of the statute, but no other. Hence, when the validity of a monopoly comes into question, the first point to consider is, whether it is rendered void by the statute; and secondly, if it should not be thereby avoided, whether it is a privilege permitted by the common law.*

In this treatise, however, we restrict ourselves to a consideration of Letters Patent for inventions. It is not every kind of discovery that can be protected by letters patent. For example, no valid patent could be obtained for a new game of skill or chance; or for a new method of calculation; or for a newly-discovered grain suitable for food; or for a newly-discovered natural substance suitable for manure, such as guano, or mineral phosphate of lime. These would not be inventions within the meaning of the statute of James I. and the decisions of our courts of law, which require a patentable invention to be referable to some *manner*

* See this subject carefully examined in *Feather v. The Queen*, (Pract. Mech. Jour., vol. 9, 2nd series, 321.)

of manufacture, in addition to the possession of the qualities of *utility* and *novelty*.

Nor is it every one who may succeed in obtaining from the Crown a grant of letters patent for an invention that is able to sustain it in a court of law. Letters patent are only valid in the hands of the first and true inventor, (the language of the statute of James,) or in the hands of those who have duly succeeded to his rights.

Again, a patent privilege cannot be granted *in perpetuum*; it must not endure for more than a limited number of years.

We shall take these things in order, and shall proceed to inquire in the following chapters—

1. What is the subject-matter or nature of a patentable invention, and what are the incidents that must by law accompany it.

2. To whom patent privileges may legally be granted.

3. What is the possible duration of such privileges, and the territory over which they may extend.

These matters being disposed of, there will still remain for consideration the very important topic of a *Specification*—the document which the law requires every patentee to draw up and make public before or soon after he obtains his letters patent. Chapters on some collateral subjects, such as *Disclaimers*, the *Assignments* of letters patent, their *Prolongation*, and the *Infringements* of patent rights, will then close this treatise.

CHAPTER II.

THE SUBJECT-MATTER OR NATURE OF A PATENTABLE INVENTION.—NO PATENT FOR A BARE PRINCIPLE.—PROCESSES.—CLASSES OF INVENTIONS.—AMOUNT OF INVENTION.

IN proceeding to consider the subject-matter or nature of the inventions which may legally be made the subject of patent privileges, it is proper to premise that no general definition can be given which shall exactly mark out what can and what cannot be included in a valid patent. Where the invention is not one of a well-known class, it will be much better for the inventor to consult some one conversant with such matters,—some one whose practical experience comes in aid of general principles, and who is bound by his profession and standing in society to the utmost secrecy,—than to rely altogether upon what is stated in books, or upon a narrow range of precedent. It is the more important that the inventor's attention should be drawn to this point previous to his incurring expense, since a patent is taken out entirely at the risk of the inventor, the Crown in no degree guaranteeing the validity of its grant, which, if contested, must be judged by the abstract rules of law applicable to the case.

We believe it will be found, on examination of the cases, that the inventions which have received the sanction of judicial decision may be classed under one or other of the following heads:—

1. *Vendible articles, the result of chemical or me-*

chanical processes, such as medicines, felt, waterproof cloth, etc.

2. *Machines, or improvements in machines.*

3. *Processes, in some cases requiring, in others not requiring, special machinery.*

We need not enter into further detail as to the inventions which fall under the first two heads; but with regard to those comprehended under the third head, we shall make some remarks, after disposing of the cases relating to scientific principles, or the laws of nature.

It has been repeatedly laid down by the Courts that

BARRE PRINCIPLES ARE NOT PATENTABLE.

A principle may be of the utmost value in the eyes of philosophers; its discovery may lead to highly important consequences, and form the germ of a striking advance in civilization; yet unless its discoverer can show at least one application of it to a useful purpose, —unless he can point out the means of gaining therefrom some immediate material advantage, he is not permitted to exclude his fellow-subjects from turning it to any account they like. “I rather think it would be difficult (said Lord Kenyon, in *Boulton v. Hornblower*) to form a specification of a philosophical principle; it would be something like an idea without a substratum.”

In the much-debated case of *Neilson v. Harford* (W. P. C. 1. 295) a great deal was said as to the point now before us. Neilson took out his patent in 1828 for the improved application of air to produce heat in furnaces, and in his specification declared that his invention consisted in passing a blast of air from the

blowing-apparatus into an air-vessel kept heated to a considerable temperature, to a red-heat or nearly so, and from that vessel, by means of a pipe, into the furnace; that the size of the vessel must depend on the blast, and on the heat necessary to be produced, but that the form of the vessel was immaterial to the effect, and might be adapted to the local circumstances or situation. The defendants, who were alleged to have infringed this patent, contended that it was void, as being for a principle. The Court of Exchequer admitted that it was very difficult to distinguish it from the specification of a patent for a principle; but after full consideration they thought that the plaintiff did not merely claim a principle, but a machine embodying a principle. They thought that the case must be considered as if the principle being well known, the plaintiff had first invented a mode of applying it by a mechanical apparatus to furnaces; and the invention then consisted in this—the interposition of a receptacle for heated air between the blowing-apparatus and the furnace. In the course of the argument, on motions subsequent to the trial, various observations were made by the learned judges on the bench, to which we shall draw the reader's attention. *Alderson, B.*, said, "The blowing-apparatus was perfectly well known; the heating of air was perfectly well known; the tuyere was perfectly well known as applicable to blast furnaces; then what he really discovered is, that it would be better to apply air heated up to red-heat, or nearly, instead of cold air. 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 space between the blowing-apparatus and the furnace, the air arrives at the red-heat." And again, in reply to the argument of the plaintiff's counsel that he claimed every vessel and every shape of closed vessel in which air could be heated between the blowing-apparatus and the furnace: "Then I think that is a principle, if you claim every shape. If you claim a specific shape, and go to the jury and say that which the other people have adopted is a colourable imitation, then I can understand it. If you claim every shape, you claim a principle. There is no difference between a principle to be carried into effect in any way you will, and claiming the principle itself. You must detail some specific mode of doing it."

The words of *Lord Chief Justice Hope*, in the case of the *Househill Company v. Neilson* (W. P. C. 1. 683), may also be cited in support of the same point, and afford a commentary upon it. "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 operations of manufacture, or the business, and arts, and utilities of life. The mere discovery of such a principle is not an invention, in the patent-law sense of the term. Stating such a principle in a patent may be a 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 purposes of human enjoyment, a person cannot in the abstract appropriate a principle to himself. But a patent will be good, though the subject of the patent consists in the discovery of a great general and most comprehensive principle in science or law of nature, if that principle is by the specification applied to any special purpose, so as thereby to effectuate a practical result and benefit not previously attained. . . . It is no longer an abstract principle. It comes to be a principle turned to account to a practical object, and applied to a special result. It becomes then not an abstract principle, which means a principle considered apart from any special purpose or practical observation, 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 instant that the principle, although discovered for the first time, is stated in actual application to, and as the agent of, producing a certain specified effect, it is no longer an abstract principle; it is then clothed with the language of practical application, and receives the impress of tangible direction to the actual business of life." "Undoubtedly (said *Eyre, C. J.*, in *Boulton v. Bull*, 1 Carp. 149) there can be no patent for a mere principle; but for a principle so far embodied and connected with corporeal substances as to be in a condition to act and to produce effects in any art, trade, mystery, or manual occupation, I think there may be a patent. . . . It is not (referring to the case before him) that the patentee has conceived an *abstract* notion that the con-

consumption of steam in fire-engines may be lessened, but he has discovered a practical manner of doing it, and for that practical manner of doing it he has taken his patent. Surely this is a very different thing from taking a patent for a principle; it is *not for a principle, but for a process*. Again, the substance of the invention is a discovery that the condensing the steam out of the cylinder, and protecting the cylinder from the external air, and keeping it hot to the degree of steam-heat, will lessen the consumption of steam. This is no abstract principle; it is in its very statement clothed with practical application.

Again, in the above-cited case of *Neilson v. Harford* (W. P. C. 1. 295) *Alderson, B.*, said (p. 342), "I take distinction between a patent for a principle and a patent which can be supported is, that you must have an embodiment of the principle in some practical mode, described in the specification, of carrying the principle into actual effect; and then you take out your patent, not for the principle, but for the mode of carrying the principle into effect. In Watt's patent, which comes the nearest to the present of any you can suggest, the real invention of Watt was, that he discovered that by condensing steam in a separate vessel, a great saving of fuel would be effected by keeping the steam cylinder as hot as possible, and applying the cooling process to the separate vessel, and keeping it as cool as possible; whereas before, the steam was condensed in the same vessel; but then Mr. Watt carried that practically into effect by describing a mode which would effect the object. The difficulty which presses on my mind here is, that this party has taken out a patent, in substance like Watt's, for a principle, that

is, the application of hot air to furnaces ; but he has not practically described any mode of carrying it into effect. If he had, perhaps he might have covered all other modes as being a variation.”

Minter's patent was for the invention of an improvement in the constructing of chairs, and such invention was declared to consist in 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. The patentee having obtained a verdict at the trial of an action for the infringement of the patent, it was contended, on a motion for a nonsuit, that the patentee had claimed for a *principle*, and not any particular means of carrying the principle into effect. Now, to a principle he was not entitled ; and as to the particular means which he in fact adopted, the defendant had not used the mechanical means of the plaintiff. The plaintiff, it was further argued, had appropriated by his specification one of the first principles in mechanics, viz. the lever. But, said *Lyndhurst, C. B.*, it is not a leverage only, but it is 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 means of which the weight on the seat counterbalances the pressure on the back of a chair. And *Parke, B.*, said, For the application of a self-adjusting leverage to a chair, cannot he patent that ? He claims the combination of the two, no matter in what shape or way you combine them ; but if you combine the self-adjusting leverage, which he thus applies to the subject of a chair, that is an infringement of the patent. *Lord Lyndhurst* went on to say that the application of a

self-adjusting leverage producing the effect constitutes the machine, and the patentee claims that machine, and the right to make it, by the application of a self-adjusting leverage producing a particular effect. (W. P. C. 1. 134.)

In the case of the *Electric Telegraph Company v. Brett* (10 C. B. R. 838), it was argued that the giving of duplicate signals at intermediate stations was not the proper subject of a patent,—being an idea or principle only, and not a new manufacture. But it was held by the Court, that as the patentees had not only communicated the idea or principle, but showed how it might be carried into effect, viz. by appropriate apparatus at each station, the patent was valid.

So, also in *Hills v. London Gas Light Company* (5 Hurlst. & Norm. 369), an action upon a patent for the purification of coal gas by the use of hydrated oxides of iron, it was argued that as the property which these oxides possess of combining with sulphuretted hydrogen, the deleterious part of unpurified coal gas, was a perfectly well-known property, the mere application of the oxides to remove sulphuretted hydrogen from gas could not be the subject of a patent. The Court of Exchequer held that if a man were simply to say that he claimed the use of hydrated oxides of iron for the purification of gas, without saying how they were to be applied, the objection might possibly be well founded; but as the patentee had shown how the oxides were to be used, the objection failed. (Comp. *Ormson v. Clarke*, 13 C. B. n. s. 337; in error, 14 C. B. n. s. 475; *S. C.* 10 Jur. n. s. 128.)

In *Newall v. Elliott*, 10 Jur. N. S. 954; (*S. C.* more fully reported, 13 W. R. 11,) the patent was for “Im-

provements in apparatus employed in laying down submarine telegraph wires;" and the specification, after describing the apparatus, concluded with the following claim :—" First coiling the wire or cable round a cone; secondly, the supports placed cylindrically outside the coil round the cone; thirdly, the use of the rings in combination with the cone as described." It was objected the invention thus claimed was merely a mode of coiling and paying out cables, and was not a new manufacture, and could not therefore be the subject-matter of a patent. The Court, however, overruled the objection, and held the patent valid.

PROCESSES.

It will have been observed, that what the statute excepts from the operation of the invalidating first clause is the privilege of the *sole working or making of any manner of new manufactures*. Now it seems to have been at one time doubted whether or no a new process of manufacturing a known article was embraced by these words of the statute. *Perhaps*, said Lord Tenterden, in the case of *Rex v. Wheeler* (2 B. & A. 350), the statute of James " may 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 and more useful kind." The current of decision since Lord Tenterden's time has converted what he put in a doubtful way into a certainty; for the books are full of cases which prove beyond doubt that a process is patentable. The patent contested in *Gibson v. Brand* (W. P. C. 1. 631) was for a new or improved process or manufacture

of silk. *Tindal, C. J.*, said that as the matter turned upon another point, it was not necessary to go into the question whether a patent could be granted for a process in the strict or proper sense of the term or not, but that undoubtedly there was strong reason to suppose that such a patent might be good in law. Such certainly was the opinion of *Chief Justice Eyre* in *Boulton v. Bull* (which opinion we shall quote at length immediately), and such also appears to have been the opinion (carefully guarding against any abuse of the doctrine) of *Lord Tenterden* in *Rea v. Wheeler*.

It has been said that the doubt as to whether a process is patentable has been needlessly raised, and that it is a misuse of terms to speak of a patentable process at all. The subject-matter of the patent, it is urged, is in reality a *manufacture according to a new process*, and this is therefore a new manufacture. For example, in *Crane v. Price*, the subject of the patent was, according to this view, the manufacture of iron by means of a new process, viz. the combination of a hot-air blast and anthracite in the furnace. In *Gibson v. Brand* it was the manufacture of silk by a new process.

We are told by *Pollock, C. B.*, (*Stevens v. Keating*, W. P. C. 2. 182,) that "the real invention may be, not so much the thing when produced, as the mode in which it is produced; and its novelty may consist, not so much in its existence as a new substance, as in its being an old substance, but produced by a different process. In one sense, an old substance produced by a new process is a new manufacture; of that there cannot be a doubt; and therefore, although the language of the Act has been said to apply only to manufactures and not to processes, when you come to

examine, either literally, or even strictly, it appears to me the expression 'manufacture' is free from objection, because, though an old thing, if made in a new way, the very making of it in a new way makes it a new manufacture. Therefore, although I think this is a patent for the process rather than the product, I think it may be a patent for the product." Again, *Coleridge, J.*, said, in *Bush v. Fox* (Macr. Pat. Ca. 176), "manufacture includes both process and result."

Allowing this explanation its full force, it will not extend to many cases wherein it has been decided that bare processes are patentable, or to cases where patents for mere applications have been supported. For example, in *Forsyth v. Riviere* (1 Carp. Rep. 401), the application of a known detonating powder to the discharge of known kinds of firearms was held to be a patentable invention. But how could this be a manufacture? Again, in the case of *Hartley's Patent* (W. P. C. 1. 54), it was held that the application of metal plates, made in the ordinary way, to ships and buildings, with the view of protecting them against fire, by preventing the access of air, was a patentable invention. In neither of these cases was any new substance produced, nor any new machinery employed.*

The observations of *Chief Justice Eyre*, on delivering judgment in the famous case of *Boulton v. Bull* (Watt's patent), are so important, that we shall lay them, with little abridgment, before the reader. "It

* "Most certainly the exposition of the statute, as far as usago will expound it, has gone very much beyond the letter" (*Eyre, C. J.*, in *Boulton v. Bull*, 1 Carp. R. 146); and *Lord Chief Justice Tindal's* remarks in *Cornish v. Keene* (W. P. C. 1. 508) show the latitude of interpretation which is given to the word 'manufactures' in the Act of Parliament. "It has a very wide and extended meaning. You may call it almost *invention*."

was admitted in the argument at the bar that the word 'manufacture' in the statute was of extensive signification; that it applied not only to things made, but to the *practice of making*, to principles carried into practice in a new manner, to new results of principles carried into practice. Let us pursue this admission. Under things made, we may class in the first place, new compositions of things, such as manufactures in the ordinary sense of the word; secondly, all mechanical inventions, whether made to produce old or new effects, for a new piece of mechanism is certainly a thing made. Under the practice of making, we may class all new artificial manners of operating with the hand, or with instruments in common use, *new processes* in any part producing effects useful to the public. When the effect produced is some new substance or composition of things, it should seem that the privilege of the sole working or making ought to be for such new substance or composition, without regard to the mechanism or process by which it has been produced, which though perhaps also new, will be only useful as producing the new substance. If Dr. James's powders had been for his method of preparing his powders, instead of for the powders themselves, that patent would have been exceptionable. When the effect produced is a substance or composition of things, the patent can only be for the mechanism, if new mechanism is used, or for the process, if it be a new method of operating, with or without old mechanism, by which the effect is produced.

“The effect produced by Hartley's invention for securing buildings from fire is no substance or composition of things; it is a mere negative quality—the

absence of fire. This effect is produced by a new method of disposing iron plates in buildings. In the nature of things, the patent could not be for the effect produced. I think it could not be for the making the plates of iron, which, when disposed in a particular manner, produce the effect; for those are things in common use. But the invention consisting in the method of disposing those plates of iron so as to produce their effect, and that effect being a useful and meritorious one, the patent seems to have been very properly granted to him for his method of securing buildings from fire. And this compendious analysis of new manufactures mentioned in the statute, satisfies my doubt whether anything could be the subject of a patent but something organized and capable of precise specification. In Hartley's method, plates of iron are the means which he employs; but he did not invent those means. The invention wholly consisted in the new method of using, or, I would rather say, of disposing a thing in common use, and which thing every man might make at his pleasure; and which, therefore, could not, in my judgment, be the subject of the patent. In the nature of things it must be that, in the carrying into execution any new invention, use must be made of certain means proper for the operation. Manual labour, to a certain degree, must always be employed; the tools of artists frequently; often things manufactured but not newly-invented, such as Hartley's iron plates; all the common utensils used in conducting any process; and so up to the most complicated machinery that the art of man ever devised. Now, let the merit of the patent be what it may, it is evident that the patent in almost all these cases cannot be

granted for the means by which it acts, for in them there is nothing new, and in some of them nothing capable of appropriation. Even where the most complicated machinery is used, if the machinery itself is not newly-invented, but only conducted by the skill of the inventor so as to produce a new effect, the patent cannot be for the machinery. In Hartley's case, it could not be for the effect produced, because the effect is merely negative, though it was meritorious. In the list of patents with which I have been furnished, there are several for new methods of manufacturing articles in common use, where the sole merit and the whole effect produced are the saving of time and expense, and thereby lowering the price of the article, and introducing it into more general use. Now, I think these methods may be said to be new manufactures, in one of the common acceptations of the word; as we speak of the manufacture of glass, or of any other thing of that kind. The advantages to the public from improvements of this kind are, beyond all calculation, important to a commercial country, and the ingenuity of artists who turn their thoughts towards such improvements is in itself deserving of encouragement; and in my apprehension it is strictly agreeable to the spirit and meaning of the statute 21 James I., that it should be encouraged; and yet the validity of these patents in point of law must rest upon the same foundation as Hartley's. The patent cannot be for the effect produced, for either it is no substance at all, or, what is exactly the same thing as to the question upon a patent, no new substance, but an old one produced advantageously for the public. It cannot be for the mechanism, for there is no new mechanism employed;

it must, then, be for the method; and I would say, in the very significant words of *Lord Mansfield*, it must be for method detached from all physical existence whatever; and I think we should well consider what we do in this case, that we may not shake the foundation upon which all patents stand. Probably three-fourths of all patents granted since the statute passed are for methods of operating and manufacturing, producing no new substances, and employing no new machinery. . . . If we wanted an illustration of the possible merit of a new method of operating with old machinery, we might look at the case now before the Court. If we consider into what general use fire-engines [steam-engines] are come—that our mines cannot be worked without them—that they are essentially necessary to the carrying on many of our principal manufactures—that these engines are worked at an enormous expense in coals, which, in some parts of the kingdom, can with difficulty be procured at all in large quantities—it is most manifest that any method found out for lessening the consumption of steam in these engines, which, by necessary consequence, lessens the consumption of coals expended in working them, will be of great benefit to the public as well as to the individual who thinks fit to adopt it. And shall it now be said, after we have been in the habit of seeing patents granted in the immense number in which they have been granted, for methods of using old machinery to produce substances that were old, but in a more beneficial manner, and also for producing negative qualities by which benefits result to the public, by a narrow construction of the word ‘manufacture’ in this statute, that there can be no patent for

methods producing this new and salutary effect, connected, and intimately connected, with the trade and manufactures of the country?" (1 Carp. 146-149).

The inventions for which valid patents have been granted may be roughly divided into the following classes:—

1. *New contrivances applied to new objects or purposes.*
2. *New contrivances applied to old objects or purposes.*
3. *New combinations of old parts, the subject-matter consisting either of material objects or of processes.*
4. *New methods of applying an old thing.*
5. *Processes or methods differing from old processes or methods only by the omission of a step.*

The reader may like to have some illustrations of these classes of inventions, and we shall proceed to offer the following:—

1. *Of a new contrivance applied to a new object or purpose, the following is an instance:—*

Lace made from cotton had the defect of being covered with a kind of down, which injured its appearance and diminished its value. A similar defect was removed from muslin by passing it over rollers of heated iron, and from mits and stockings by the action of flame, fed by oil or alcohol. It occurred to Mr. Hall that the flame of gas might be employed in the manufacture of cotton lace; and after some failures, he succeeded in inventing a method for removing the unsightly fibres by the flame of gas. A patent obtained for this invention was held good. (*Hall v. Jarvis*, W. P. C. 1. 100).

2. *A new contrivance employed to effect a well-known*

object—to make, for instance, an article previously made in a different way—is also patentable, provided that the new contrivance is attended with some degree of utility; for example, that it accomplishes the result more cheaply than the old contrivance. This is perhaps the largest class of patented inventions. “There may be a valid patent” (said *Lord Eldon* in *Hill v. Thompson*, W. P. C. 1. 237) “for a new combination of materials previously in use for the same purpose, or for a new method of applying such materials.”

3. *The simple combination of two or more known things has been held a patentable invention*, when the combination is new, and the result is the production of something better, or of something at a lower cost, than before. It was held in *Crane v. Price* (W. P. C. 1. 408) that the combination of the hot-air blast with stone coal in the smelting of iron (the hot-air blast and stone coal having been separately in use before, but the combination being previously unknown) was an invention intended by the statute, and such as might well become the subject of a patent. It was said by *Tindal, C. J.*, that there were numerous instances of patents where the invention consisted in no more than in the use of things already known, and acting with them in a manner already known, and producing effects already known, but producing those effects so as to be more economically or beneficially enjoyed by the public.

That the novel combination of old parts having a useful result may form the subject of a valid patent has been again and again decided. (*Lister v. Leather*, 8 E. and B. 1004; *Newall v. Elliott*, 10 Jur. n. s. 954; *S. C.* 13 W. R. 11).

4. *A new mode of applying a known thing may be the*

subject of a patent, provided that some ingenuity, some novelty, is exhibited in the mode of making that application, and that the application is attended by some useful result. In Watt's patent for a new method of lessening the consumption of steam and fuel in steam-engines, the enclosing of the cylinder in a case of wood, or any other material that transmits heat slowly, was claimed, and allowed to be a patentable invention. (*Boulton and Watt v. Bull*). In Forsyth's patent, for a method of discharging fire-arms, the patentee claimed the *use* and application of certain known fulminating compounds for this purpose. It was contended that, since the properties of detonating powder were well known for other purposes, the using of such materials to discharge fire-arms was not a new manufacture for which a patent could be supported. But *Abbott, C. J.*, stated that if the invention (*i. e.* this particular application of detonating powder) were new, it was such an one as might be secured by patent. The jury having found the invention to be a new one, the patentee had a verdict. (*Forsyth v. Riviere*, 1 Carp. 404.)

Charcoal had been used in refining sugar previously to Derosne's patent; but the old method was to mix charcoal powder with the syrup, and the new was to pass the syrup through beds of charcoal constructed in a particular manner. By the old process a considerable quantity of charcoal was taken up by the syrup, and this was an injury to the sugar. In Derosne's process this objection did not arise; and, moreover, it was applicable not only to the refinement of coarse sugar, but to the original manufacture of sugar out of cane-juice. In an action brought for infringing the patent, the originality of the invention was held not

to be impeached by showing that there had been an earlier use of charcoal in the refinement of sugar. No evidence was given that any other person, before the date of the plaintiff's patent, ever applied in use the *particular mode* of filtering syrup which the patent was intended to introduce: and in the absence of such evidence, *Lord Abinger* directed the jury to find for the plaintiff. (*Derosne v. Fairie*, W. P. C. 1, 154.)

In the case of *Cornish v. Keene*, a patent for improvements in the manufacture of elastic fabrics was contested. The patentee's object was to produce cloth from cotton flax, or other suitable material, not capable of felting, in which should be interwoven elastic cords of India-rubber coated with filamentous material. He described the mode of effecting this object to be by introducing into the fabric threads of India-rubber, applied as warp or weft, or as both, according to the direction of the elasticity required—the India-rubber threads having been stretched to their utmost tension and rendered non-elastic before being introduced into the fabric, and then being rendered elastic by the application of heat. It was contended that this was not a new manufacture; that it was neither a new manufacture, nor an improvement of an old manufacture, but was merely the application of a known material, in a known manner, to a purpose known before. "That it is a manufacture" (said *Tindal, C. J.*, delivering the judgment of the Court of Common Pleas,) "can admit of no doubt; it is a vendible article, produced by the hand and art of man. Whether it is new or not, or whether it is an improvement of an old manufacture, was one of the questions for the jury, upon the evidence before them; but that it came within

the description of a manufacture, and so far is an invention which may be protected by a patent, we feel no doubt whatever. The materials, indeed, are old, and have been used before; but the combination is alleged to be, and if the jury are right in their finding, is new; and the result or production is equally so. The use of elastic threads or strands of India-rubber, previously covered by filaments wound round them, was known before; the use of yarns of cotton, or other non-elastic material, was also known before: but the placing them alternately side by side together as a warp, and combining them by means of a weft when in extreme tension, and deprived of their elasticity, appears to be new; and the result, viz., a cloth in which the non-elastic threads form a limit up to which the elastic threads may be stretched, but beyond which they cannot, and therefore cannot easily be broken, appears a production altogether new. It is a manufacture at once ingenious and simple." (W. P. C. 1. 517.)

It must be carefully kept in mind, that unless there is some display of ingenuity, a patent for the application of an old contrivance to a new object will not be valid. But it is impossible to lay down any general rule as to the amount of ingenuity which is essential to support a patent. In nice cases, there can be no certainty previous to a judicial decision on the point whether any given patent is or is not impeachable on the ground of want of ingenuity; which phrase cannot be regarded, perhaps, as different from want of novelty. All that can be done is to study the decisions already made, and to be guided by those cases which approach nearest to the one about which doubt may be felt. Some of the decisions, indeed, seem to conflict with

others; and it will require a good deal of acute discrimination on the part of those who are called on to advise inventors, to distinguish the line which separates what is patentable from what is not patentable. In the case of *Kay v. Marshall*, Lord Cottenham said, in the House of Lords, "that if Kay had discovered any means of using the machine (*i.e.* the ordinary spinning machine) which the world had not known before, the benefit of that he had a right to secure to himself by means of a patent; but if this mode of using the spinning machine was known before, then he could not deprive them of having the benefit of that which they enjoyed before" (2 W. P. C. 82). The reader will see how nearly such a proposition conflicts with the case of *Bush v. Fox*. (Macr. P. C. 152.)

5. *A mode of manufacturing differing in nothing from an old process, except in the omission of a step, may also form the subject of a patent, as was decided in the case of Russell v. Cowley* (W. P. C. 1. 459). A patent had been obtained for an invention for manufacturing iron tubes, by welding them without the use of a mandril, or internal support; and its validity being contested, it was held good. The process, from first to last, consisted in turning up the edges of a flattened metal plate until they nearly met; in heating the plate, so prepared; and in drawing it when at a welding heat through dies having a conical hole. In passing from the broader to the narrower end of the hole, the edges were compressed against each other, and were welded together; the tube was thus formed without having recourse to the old process, which required a mandril, whereon the overlapping edges of the metal plate were welded by means of hammers. It being contended that

welding by pressure was not a new invention, *Lord Lyndhurst* read the specification as claiming only the manufacture of tubes without a mandril. By the new process, tubes could be made of greater length, of greater uniformity, and considerably cheaper, than before.

Again, it was held in *Booth v. Kennard* (Hurlst. & Norm. Ex. Rep. 1. 527), that to obtain gas by the direct distillation of oleaginous seeds was a patentable invention, although gas had been previously obtained by the distillation of oil expressed from oleaginous seeds.

AMOUNT OF INVENTION REQUIRED TO SUPPORT A PATENT.

In contesting the validity of a patent, it is often objected that there had been no exercise of ingenuity on the part of the alleged inventor in arriving at his invention, and that mere accident or good luck is not entitled to a patent privilege. Where, however, the utility of the invention is great, and the novelty undoubted, these facts will come in aid of an apparent want of ingenuity on the part of the inventor. "In point of law (said *C. J. Tindal*, in *Crane v. Price*, W. P. C. 1. 411), the labour of thought or experiment, and the expenditure of money, are not the essential grounds of consideration on which the question whether the invention is or is not the subject-matter of a patent ought to depend; for if the invention be new and useful to the public, it is not material whether it be the result of long experiment and profound search, or whether by some sudden and lucky thought, or mere accidental discovery." In either of the two last cases, the practical realization of a good idea must be considered a sufficiently meritorious consideration for the exclusive privilege granted to the inventor, although the actual amount of thought

expended in making the invention is trifling. The case of water-tabbies, so often mentioned in Westminster Hall, is a case in point. The invention (according to *Mr. Justice Buller*, in *Boulton v. Bull*) first owed its rise to the accident of a man's spitting on a floor-cloth, which changed its colour, whence he reasoned, had his patent, and made, it is said, a considerable fortune by it.

The making of iron gas-tubes without the use of a mandril, viz. by welding them without striking them on a solid surface, "seems to be a very simple invention" (said *Lyndhurst, C. B.*, in *Russell v. Cowley*); "but it has been productive of great advantages, inasmuch as it has enabled the manufacturer to construct pipes of lengths much beyond what could be done previously to this discovery" (W. P. C. 1. 467). Hence the utility of the invention was apparent from the important consequences that flowed from it, and the patent was supported.

The case of *Lewis v. Davis* (W. P. C. 1. 488) is usually cited to show that a small degree of invention suffices to sustain a patent, provided it be attended with useful results. The object of the patent was the shearing of cloth from *list to list* by means of rotatory cutters. Now a rotatory cutter to shear from *end to end* was known, and cutting from list to list by means of shears was also known. "However" (said *Tenterden, C. J.*, to the jury, on the trial of an action for the infringement of the patent, in which the question of novelty was raised), "if before the plaintiffs' patent the cutting from list to list, and the doing that by means of rotatory cutters, were not combined, I am of opinion that this is such an invention by the plaintiffs as will entitle them to maintain the present action."

CHAPTER III.

THE INCIDENTS OF UTILITY AND NOVELTY WHICH MUST
BY LAW ACCOMPANY PATENTABLE INVENTIONS.

THE two chief incidents which are required by law to attend every invention that claims the protection of letters patent, are Utility and Novelty.

If a material part of the alleged invention should turn out to be either not useful or not novel, the patent is altogether void, the legal maxim *utile per inutile* being here disregarded. (See *Crossley v. Beverley*, W. P. C. 1. 106; *Hill v. Thompson*, W. P. C. 1. 249; *Manton v. Parker*, Dav. P. C. 327; *Bloxam v. Elsee*, 1 Carp. 444). And in like manner, where several distinct inventions are included in one patent, of which some only are useful or novel, the useless or old invention or inventions will invalidate the whole patent. (*Turner v. Winter*, Dav. P. C. 145; 1 T. R. 602; *Bloxam v. Elsee*, 6 B. & C. 178; *Morgan v. Seaward*, W. P. C. 1. 196; *Kay v. Marshall*, 2 W. P. C. 71). The Crown having been misled as to the extent of the invention, the grant of letters patent in respect of it is void. It was on this principle that the Court, in deciding *Morgan v. Seaward*, looked at the cases of *Hill v. Thompson* (W. P. C. 1. 237), and *Brunton v. Hawkes* (4 B. & A. 541); in which a patent for several inventions was held to be altogether void, because one was not new. The want of *novelty* is a fatal defect by the express wording of the statute, so far as relates to that

which is old; and the whole patent is rendered void by the construction that the consideration for the grant is the novelty of all the parts, which consideration failing, or as it is sometimes expressed, the Crown being deceived, the patent is void.

The questions as to the utility and novelty of the inventions, in respect of which a patent is sought, or has been granted, are consequently of the utmost importance, and it will be necessary to go into the matter at some length. And first, as to the question of

UTILITY.

If an invention contains no degree of usefulness whatever, over and above inventions already known, then the patent is void. (*Manton v. Parker*, Dav. P. C. 327.)

A patent for a useless invention is thought by some to be void at common-law; by others, by force of the Statute of Monopolies, which renders void grants of privileges which tend to the hurt of trade, or are generally inconvenient. For, if a monopoly were allowed in a useless invention, other persons would be prevented from improving it, or turning it to any account whatever, so that combinations of utility might be impeded. It would stand in the way of real inventors, and hence be mischievous to the public generally. (See the observations of *Parke, B.*, in *Morgan v. Seaward*, W. P. C. 1. 196.) On the trial of *Palmer v. Wagstaff*, at Nisi Prius (Newton's Lond. Journ. vol. xliii. p. 131), *Chief Baron Pollock* said that, in legal language, it is a fraud on the law of patents for any person to take out a patent with a view to the obstruction of improvements. The evidence showed that the plaintiff's patent, which

it was alleged the defendant had infringed, had never been worked; no attempt had been made to bring the candles of the patented construction before the public; and the patent was only then brought into play, for the purpose of stopping the defendant from a course of improvement.

It is to be observed that the recital of the Crown's willingness "to give encouragement to all arts and inventions which may be for the *public good*," clearly points to the quality of utility as one of the considerations for the grant, which failing, the patent will be invalid.

It is for the jury, not the Court, to decide the question of utility when the point has been raised by appropriate pleadings;* and the question will go before them in the general shape of utility or no utility. They have not to consider to what extent the invention is useful, but only whether it is of any use at all. *Mr. Baron Parke*, in *Neilson v. Harford* (W. P. C. 314), speaking of a patent for the use of hot-blasts in furnaces, laid it down, that if the apparatus were an improvement, so as to be productive, practically, of some beneficial result, no matter how great, provided it is sufficient to make it worth while (the expense being taken into consideration) to adapt such an apparatus to the ordinary machinery in all cases of forges, cupolas, and furnaces, where the blast is used, then

* That the patentee must go into proof of the utility of his invention in case that issue is raised is shown by what fell from the Judges in the cases of *Rex v. Arkwright*, Dav. P. C. 138; *Manton v. Parker*, Dav. P. C. 327; *Manton v. Manton*, Dav. P. C. 338; *Bovill v. Moore*, Dav. P. C. 399; *Brunton v. Hawkes*, 4 B. & Ald. 541; *Russell v. Cowley*, W. P. C. 1. 467; *Hill v. Thompson*, W. P. C. 1. 237; *Minter v. Wells*, W. P. C. 1. 129; *Crans v. Price*, W. P. C. 1. 411.

that there would be utility sufficient to support the patent. The *quantum* of improvement (should an improvement be in dispute) is not a material point; it is enough that they can find *any* improvement. (*Alderson, B.*, in *Morgan v. Seaward*, W. P. C. 1. 172, 186.) In other words, in order to quash a patent on this ground, a jury must expressly find that the invention is of no use.

But it must be kept in mind, that it is the *invention* which is required to possess utility, not merely the thing produced. As *Pollock, C. B.*, remarked, on trying the case of *Palmer v. Wagstaff* (above cited), it is not sufficient for the maintaining of a patent to prove that the article produced under it is useful; it must be the invention that effects the utility. Thus a patented manufacture should be either better in quality, or cheaper in cost, than that which it is intended to supplant.

The uselessness of part of an invention, however, will not be allowed to vitiate the patent, unless that part is described as something essential. The case of *Lewis v. Marling* (W. P. C. 1. 488), arose out of a patent for an improved machine for shearing woollen cloths, in which the patentee claimed, amongst other things, the use of a brush for raising the wool on the surface of the cloth to be shorn, but not as an essential part of the machine. Before any machine was made for sale, this part of the invention was discovered to be useless, and no machines were ever sold with the brush attached. It was contended that this uselessness of part vitiated the whole, but *Lord Tenterden* said, "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 plaintiff's claim to be the inventors of a certain part of the machine not described as essential, and which turns out not to be useful." *Bayley* thought that if the patentee had known the brush to be unnecessary, the patent would be bad, on the ground that this was a deception ; but if he believed it to be proper, and only by a subsequent discovery found out that it was not necessary, it would form no ground of objection.

In the case of *Haworth v. Hardcastle* (W. P. C. 1. 480), the jury found specially that the invention was useful upon the whole, but that the machine was not useful in some cases. The judges of the Court of C. P. held that this finding of the jury did not negative the utility of the machine in the generality of cases, but rather led to the inference that in the generality of cases it was useful, in which event the patent would be valid, and it was accordingly supported.

One good test of the utility of an invention is afforded by showing that an improvement of the trade (using these words in their commercial sense) has taken place in consequence of it. The invention patented by Lord Dudley consisted in substituting pit-coal for charcoal in the manufacture of iron. Neilson patented a process of smelting iron by blowing the furnace with hot in place of cold air. Crane smelted iron by means of anthracite instead of ordinary fuel, and combined the hot-blast with this. All these processes were productive of great improvements in the manufacture of iron, and the patents were all supported by the Courts.

Brunton took out a patent for an improvement in

chain cables, which consisted in making the links with straight sides and circular ends, in place of twisted links, and in substituting a cast-iron stay with broad ends embracing the sides of each link for a wrought-iron stay formerly fixed across the middle of the opening of the link to prevent it collapsing. The combination of a link with a stay of those particular forms was considered so far new, although the form of the link had been previously known, that the inventor would have had the benefit of his patent, upon his showing that the combination operated beneficially, if the patent had been obtained for this combination alone (*Brunton v. Hawkes*, Carp. R. 1. 412).

It has been said from the Bench, that the fact of a published invention not meeting with public acceptance, is some presumption against its utility. It is something for a jury to take into consideration, when the question of utility is raised before them, that a machine has not been called for by the public (*Morgan v. Seaward*, W. P. C. 1. 186).

We now turn to the question of

NOVELTY.

The statute of James declares excepted from the invalidating clause "all letters patent and grants of privilege of the sole working or making of any manner of *new manufactures* to the true and first inventor of such manufactures, *which others at the time of making such letters patent and grants should not use.*" Moreover, letters patent invariably contain a clause, avoiding the grant in case the invention "is not a *new invention* as to the public use and exercise thereof." Two distinct issues on the point of novelty are usually raised

upon the pleadings when a patent is in controversy—1st, Whether the patentee is the ‘true and first’ inventor of the patented invention; and 2nd, Whether the subject-matter of the patent is a new invention as to the public use and exercise thereof. “Sometimes” (said *Tindal, C. J.*, in *Cornish v. Keene*, W. P. C. 1. 507) “it is a material question to determine whether the party who got the patent was the real and original inventor or not; because these patents are granted as a reward, not only for the benefit that is conferred upon the public by the discovery, but also to the ingenuity of the first inventor; and though it is proved that it is a new discovery so far as the world is concerned, yet if anybody is able to show that although that was new, 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.’

It cannot, however, be objected to a patent that the invention is wanting in novelty, because something, with a similar object, has already been made the subject of a patent; provided that the means by which the object is attempted to be accomplished are substantially different in the two cases.

Neither is a patent rendered invalid by the fact that the invention includes the subject-matter of a patent previously obtained, and not yet expired (*Crane v. Price*, W. P. C. 1. 413; *Ex parte Fox*, 1. V. and B. 67). Of course, the second patentee must obtain the first patentee’s licence before working his own patent, or he

will lay himself open to an action for an infringement as long as the earlier patent remains in force; and, of course, there must be some amount of new invention in addition to the previous invention, otherwise there is nothing to afford a foundation for a patent.

In *Minter v. Mower* (W. P. C. 1. 140), it appeared that the plaintiff had taken out a patent for an improvement in reclining chairs, consisting in 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. Mower, the defendant, made chairs in imitation of Minter's chair, and contended, in an action for infringing the patent, that the plaintiff was not the first and true inventor, alleging that one Brown had, previous to the patent, made chairs embodying a similar principle. It appeared, however, that although Brown's chair contained a similar principle to that patented, it was incumbered with machinery which rendered it a very different thing from the plaintiff's. *Lord Denman* said that, supposing Brown's chair to have been a chair with a self-adjusting leverage (*i. e.* a chair similar to the plaintiff's), if the incumbering additional part had been away, "then the question is, whether the principle of self-adjustment was at all discoverable or thought of at that time. Because, it seems to me, if that principle might have been deduced from the machinery of the chair that was made, but it was so encumbered and connected with other machinery that nobody did make that discovery, or ever found out that they could have a chair with a self-adjusting leverage, by reason of that or any other defect in the chair actually made; it seems to me that does not prevent this from being a

new invention, when the plaintiff says, I have discovered, throwing aside everything but this self-adjusting leverage itself, that will produce an effect, which I think a very beneficial one."

The case of *Losh v. Hague* (W. P. C. 1. 202) may be advantageously compared with that of *Minter v. Mower*. Losh's patent was for improvements in the wheels of railway-carriages, and these improvements consisted in constructing the pieces composing the entire wheel of malleable iron, and then welding them together. It was contended by the defendant that the invention was not new, inasmuch as one Paton had, previous to the date of Losh's patent, and under a patent of his own, specified a mode of constructing wheels, not, however, for railways, since railways did not then exist, which wheels were of wrought iron, and differed little, if at all, from those patented by Losh; moreover, that although the first wheel made under Paton's patent was riveted, all Paton's other wheels, thirty pairs in number, were made with the circumference of the inner rim entirely of wrought iron, and then welded into one piece. "The question you have to try," said *Lord Abinger* to the jury, "on the originality of Losh's invention, is not whether Paton's patent contains that perfect periphery that is required in this case, but whether wheels have been publicly made on this principle." (The jury by their verdict found that wheels had been previously made on the same principle as Losh's wheels.) "If," continued his lordship, "the wheels had been made and sold to any one individual, the public's not wanting them because there were no railways, their not being adapted to any particular use, which at that time was open to the public to apply

them to, makes no difference. You have it in evidence that these wheels were made in the first instance; that thirty pairs were made with a complete continuous circumference all round. If they were so made and sold, or used at all, though not for any purpose that then made them popular or desirable, still they are made with that particular advantage which is claimed by Losh's patent, namely, a periphery made of one continuous piece of wrought iron, as well as the spokes. But that is not all the evidence; there are two parties from Manchester. One Horsfall says that he remembers, nearly twenty-eight years ago, in the year 1810, when he came into the employ of his present employers, that there were three trucks, having each three wheels, and those wheels were made of wrought iron spokes in a wrought iron circumference, and there is one exhibited before you which was actually in use at that time; the other, Roberts, confirms that, and has stated that they existed for many years, and that they have been used."

In *Lewis v. Marling* (W. P. C. 1. 496), *Bayley, J.*, said, "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 in his mind, unless it has become public." And *Parke, J.*, said, "There is no case in which a patentee has been deprived of the benefit of his invention because another had also invented it, unless he had also brought it into use." Again, in the case of *Hill v. Thompson* (W. P. C. 1. 244), *Dallas, J.*, said, "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 evidence given in *Lewis v. Marling*, to impugn the patentee's claim of novelty, was that several years previously a similar machine was in use at New York, and that a specification had been sent over in 1811 to a person residing at Leeds, who employed two engineers to manufacture a machine from it, which was never finished, in consequence of disturbances amongst the populace. The specification was shown to several persons; but the machine was never brought into use. In 1816, a model of a machine for shearing from list to list, by means of a rotatory cutter, was brought over from America, and shown to two or three persons in the manufactory of the importer; but no machine was ever made from it, nor was it publicly known to exist. Moreover, one Coxon, many years previously, had made a machine to shear from list to list, and this was tried by a person called as a witness; but he did not think it answered, and soon discontinued the use of it. *Lord Tenterden* told the jury that if it could be shown that the patentee had seen the model or specification, that might rebut the claim of invention; but there was no evidence of that kind; and he left it to them to say whether the invention had been in public use and operation before the granting of the patent. They found that it had not; and on the motion for a new trial, the Judges thought there was no reason to find fault with the verdict.

In charging the jury assembled to try the action of *Cornish v. Keene* (W. P. C. 1. 508), *Tindal, C. J.*, said, that "if the invention was at the time the letters

patent were granted in any degree of general use; if it was known at all to the world publicly, and practised openly, so that any other person might have the means of acquiring the knowledge of it as well as the person who obtained the patent, then the letters patent are void. Now it will be a question for you to say whether, upon the evidence which you have heard, you are satisfied that the invention was or was not in public use and operation at the time the letters patent were granted. It is obvious that there are certain limits to that question; the bringing it within that precise description which I have just given, must depend upon the particular facts which are brought before a jury. 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 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 that 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, when properly considered, classes

itself under the description of experiment only, and unsuccessful experiment, that 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 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 from your application.' Therefore it must be between these two 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, the evidence which has been brought before them convinces them that the subject of the patent was in public use and operation at that 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."

Hancock v. Somervell (reported in Newton's L. J., vol. 39, p. 158) is a recent case in which peculiar circumstances were adduced in evidence for the purpose of rebutting the claim to novelty. Hancock's patent was for improvements in the preparation of caoutchouc, and the invention consisted in combining sulphur with the caoutchouc, which rendered it elastic at all temperatures. The defendants imported from America

shoes made of caoutchouc, which, when analyzed, were found to contain sulphur along with oxide of lead and other ingredients. In an action for an infringement of the patent it was proved in evidence, that previous to the date of the plaintiff's patent specimens of caoutchouc prepared by sulphur were sent to England by Goodyear, of New York, and were shown to Hancock, but the secret of the manufacture was not communicated to him. Negotiations were commenced for the sale of the invention to Hancock, but never completed. It was stated in evidence that Goodyear's agent left specimens with Hancock, supposing that it would not be possible for him to discover the process by which it was prepared. However, Hancock made experiments, and discovered that sulphur endowed caoutchouc with the property of elasticity at all temperatures, and he then took out his patent. *Mr. Justice Williams* left it to the jury to say whether, supposing the shoes to have been manufactured in England, they could have been made without infringing the plaintiff's patent; and then he proceeded to make these remarks upon the novelty issues:—"The defendants do not deny that Hancock is to be considered the inventor, notwithstanding Goodyear had previously made the discovery, provided the invention had not been published or in use in this country before the date of the patent. The defence consists of this—not only had Goodyear discovered the invention first, but also that the invention had been substantially published, and was in use, not in secret use, but in public use before the date of the patent; that the material being in public use, the ready means of the invention were also necessarily before the public; because it is said the

article presented in itself such means of knowledge to the public as to enable any one of ordinary competence to reproduce the article. If you should be of opinion that the material was in use before the date of the patent, then the question resolves itself into this: what is your opinion as to whether the publication of the material was substantially a publication of the invention? If you should find that the material was in public use, but that, notwithstanding, the invention remained still a matter to be discovered, in my opinion the plaintiff's case would not be affected by the circumstance of the material being in public use. If, on the other hand, you should think not only that the material was in public use (and I should here say that I do not think it is necessary the use should be actual sale;—if it were in public use it need not be sold; it would be sufficient, for instance, if it were in use, handing about the country for the purpose of attracting customers); if you should think, also, that the material being so in use, it was so palpable how you could make it, when you got the material, that substantially the disclosure of the material was a disclosure of the means of making it;—if you do not think that, then I think the plaintiff's case is unaffected by the circumstance of the material being before the public in the way I have been describing.” The jury found a verdict for the plaintiff.

On the trial of *Muntz v. Foster* (2 W. P. C. 103-108), *Tindal, C. J.*, said to the jury, with reference to the issue as to the novelty of the invention—“ I look upon the invention to consist in this, that Muntz has by an experiment ascertained that a certain mixture of the alloy of zinc with copper will have the effect of pro-

ducing a better sheathing, by reason and by means of its oxydating just in sufficient quantities—that is, not too much, so as to wear away and impair the sheathing and render the vessel unsafe, but enough, at the same time, to keep by its wearing the bottom of the vessel clean from those impurities which before attached to it. That I consider to be the meaning of the patent, and the object with which it was taken out. And I cannot think, that if it was shown (as possibly it might be) that sheets had been made of metal before, in the same proportion which he had pointed out—that if this hidden virtue or quality had not been discovered or ascertained, and consequently the application never made, I cannot think the patent will fail on that ground. I look upon it that there is as much merit in discovering the hidden and concealed virtue of a compound alloy of metal, as there would be in discovering an unknown quality which a natural earth or stone possessed. We know, by the cases that have been determined, that where such unknown qualities have, from the result of experiments, been applied to useful purposes of life, that such application has been considered as the ground, and the proper ground, of a patent; and, therefore, when I come to that part of the case in which they seek to show this is not so, because these metal plates have been invented before—that is, persons have used them before—in my judgment it will not go far enough, unless they can show there has been some application of them before to this very useful purpose. . . . I do not think that the circumstance of showing that the combination of these two materials in a metal plate will of itself destroy this patent, when no attention at the time was paid to the

purpose for which this patent was taken out, and it was made merely in the ordinary course of melters of metals for the various and ordinary purposes of life. I do not think that the circumstances of showing, that in the long time that has passed before us in the different, and I may say infinitely varying, combinations that must have been made for the various purposes for which brass and other metal was manufactured for ordinary and common purposes of life—to call a workman to show that on some occasion or occasions he had combined them in those proportions for another and different purpose; it does not appear to me that such destroys the patent.”

The existence of a patent for a certain application of a given thing (which thing is not new) will not vitiate a subsequent patent for another application of the same thing, provided that the two applications are perfectly distinct, and that the second application is not in any way embraced by the specification under the first patent. One Vaucher took out a patent for an improvement in packing hydraulic and other machines by means of a lining of soft metal, whereby certain parts of the machines were rendered air-tight and water-tight. It was subsequently discovered by one Newton, that the same material, soft metal, could be usefully employed in diminishing the friction of machinery in rapid motion, and in preventing the generation of heat, by applying it to the surfaces in contact. It was held, in an action for an infringement of Vaucher's patent, that the two applications of soft metal were essentially different, and consequently that Newton's invention was new, and his patent good (*Newton v. Vaucher*, 6 Exch. Rep. 859).

Under a patent for the purification of gas, Mr.

Croll specified for the use of oxides of iron, which expression was held to mean both hydrated and anhydrous oxides of iron. Hills afterwards obtained a patent for the use of anhydrous oxide of iron for the same purpose; but it was said, in an action which he brought for the infringement of his patent, that he had been anticipated by Croll. On his part it was argued that as it was a fact that some oxides would answer the object in view, and some would not, it became a subject for investigation and experiment to ascertain what oxides it would be proper to employ, and that when he had made the discovery he was entitled to a patent in respect of it. The Court of Exchequer held that this discovery might properly be the subject of a patent. (*Hills v. London Gas Light Co.*, 5 Hurlst. and Norm. 312.)

In the case of *Betts v. Menzies* (10 H. L. C. 117; S. C. 9 Jur. n. s. 29), it was held that a general description in a prior specification or in a published book, even if suggesting information or involving some speculative theory pertinent to the invention in question, is not to be considered as anticipating, and therefore avoiding for want of novelty, a subsequent patent involving a practical invention productive of beneficial results, unless it is ascertained that the antecedent publication involves the same amount of practical and useful information. Betts' patent was for the production of a material capable of application to many useful purposes by combining plates of lead and tin by means of pressure. It appeared that as far back as 1804 one Dobbs had patented a process for making a new material by combining lead and tin by pressure, but he did not with any precision define the relative thicknesses of the plates of metal nor the degree of

pressure to be applied, whereas Mr. Betts entered minutely into those points. Moreover, it was not shown that the earlier process had ever been carried into practice. Under these circumstances, the House of Lords held that Betts' invention had not been anticipated. See also the observations of *Wood, V. C.*, in the subsequent case of *Betts v. De Vitre* (11 L. T. N. S. 445), in which the validity of the same patent was in question.

A patent is not deprived of the attribute of novelty because in the interval between its date and the date of the specification the invention has been made public. One Desgrands took out a patent in November, 1832, and enrolled his specification in May, 1833. Sievier's patent was dated in January, 1833, and his specification in July of the same year; but the article made under this patent was publicly manufactured and largely sold in the intervening March and April. Assuming the invention in these two patents to be the same, it was contended that the latter patent was void for want of novelty; but after argument in the Court of C. P., it was held that the facts did not warrant such a construction. (*Cornish v. Keene*, W. F. C. 1. 519).

When the pleadings in an action upon a patent raise the issue of the novelty of the invention, the use in public of that invention, prior to the date of the patent, may be given in evidence; and if this can be proved to the satisfaction of the jury, the patent is void. The previous use of an invention may have been open, notorious, and general; or it may have been practised only by one or two persons, under circumstances which leave it doubtful whether the user was a public user. It therefore becomes necessary to inquire

WHAT IS PUBLIC USER?

One of the first cases which the books contain was decided in 1798. Tennant brought an action for an infringement of a patent which he had obtained for a method of using calcareous earths instead of alkaline substances in bleaching. It was proved, on the one hand, that bleachers were generally ignorant of the patented bleaching liquor until after the date of the patent. On the other hand, it was proved that a certain bleacher had used the same method of preparing bleaching-liquor for five or six years previous to the date of the patent; and that the method had been kept secret from all except his two partners, and two servants employed in preparing the liquor. On this evidence the plaintiff was nonsuited, the previous user being held to render the patent invalid (Dav. P. C. 429).

The case of *Carpenter v. Smith* (W. P. C. 1. 530) arose out of an alleged infringement of a patent for an improved lock. "I think," said *Lord Abinger* to the jury, "that what is meant by 'public use and exercise' 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 any use of it; because the mere speculations of ingenious men, which may be fruitful of a great variety 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 celebrated 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 upon them, as he never brought out any machines whatsoever, those patents are good. So that the meaning of these 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 which 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. 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 own gate, and has used it for a dozen years, that is a public use of it. If it were otherwise, see what the consequence would be. If 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 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

* "If a person" (asked *Dallas, J., Hill v. Thompson*, W. P. C. 1. 240) "had done precisely all that is specified to be done in this specification, and had not communicated it to any one, could he be prohibited by the patent from doing that which he had done before, though known to no one but himself; or could it be considered as new, if practised by only one person, but not communicated to the world?" And *Tindal, C. J., in Cornish v. Keene* (W. P. C. 1. 511), observed that "if the defendants had shown that

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? For recollect that the words of the statute show that the patentee is to be the inventor. And one of the questions you have to try is, whether he is the inventor, as well as whether there is any novelty in the invention. A man cannot be said to be the inventor of that which has been exposed to public view, and which he might have had access to if he had thought fit." The same judge subsequently said, in the same case, "If you are of opinion (not that they were generally adopted by the public and used by the public, for that, in my opinion, is a perfect fallacy) that the use of them is public, and the exercise of the invention was public, and not kept secret so that the public might have no benefit from it, then I think that part of the issue you ought to find for the defendant." The learned judge summed up the evidence as to a public user, in this way:—Twenty-six years ago, Freer, a trader living in Birmingham, who is much connected with the American trade, produced to Tilsley, who is a factor, and also a manufacturer of hardware goods, a model of a lock, and desired him to make six dozen like it, and afterwards a dozen-and-a-half. Tilsley employed Walker to execute the order, and gave him the model. The locks were made, and Freer paid for them. "Here you have an article manufactured by an English manufacturer, and sold; and in my opinion, if it was sold even for the assumed purpose of being sent to America,

they practised it (*i. e.* the patented invention), and produced the same result in their factory before the time the patent was obtained, they cannot be prevented by the subsequent patent from going on with that which they have done."

I cannot but think that that would be a destruction of the novelty of the plaintiff's invention. I do not mean to say, that 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 that 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 when 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 secrecy 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 workman; 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 without violating Carpenter’s patent, although you did it twenty-six years ago, and made a profit by your manufacture of it.’ ”

These observations of *Lord Abinger* were made at the trial of an action which terminated in favour of the defendant. On the motion for a new trial, on the ground of misdirection, the Judges of the Court of Exchequer expressed themselves satisfied with his lordship’s view of the law, and refused a rule, *Alderson, B.*, saying that “ public use means a use in public, so as to come to the knowledge of others than the in-

ventor, as contradistinguished from the use of it by himself in his chamber.”

At the trial of *Hancock v. Somervell* (reported in Newton's London Journal, vol. 39, p. 158), *Mr. Justice Williams* told the jury, that in order to rebut the patentee's claim of novelty, it was not necessary that the alleged invention should have been used by the public; it was sufficient if it were shown to have been in use in public, in contradistinction to secret use.

The point as to public use was again raised in an action for infringing a patent for paving streets with wooden blocks. It was shown at the trial, that some time before the date of the patent, the carriage-way of the porch of Sir W. Worsley's dwelling-house in Yorkshire had been laid with blocks of wood, on a system apparently similar to the plaintiff's. *Cresswell, J.*, told the jury, that if they thought the plaintiff's method of constructing the wooden pavement was the same as that adopted at Sir W. Worsley's, there was an end of the case; for the invention must be deemed to have been made public. It had been publicly used, and made known to all persons who went to the house, so far as ocular inspection could acquaint them with it. Whether it had been used by one or used by five, the learned judge thought made no difference. (*Stead v. Williams*, 2 W. P. C. 136.)

In another action for infringing the same patent brought against another defendant, it was proved that the pavement at Sir W. Worsley's was on a different principle from the plaintiff's. *Parke, B.*, told the jury, that if the mode of forming and laying the blocks at Sir W. Worsley's had been precisely similar to the plaintiff's, that would have been a sufficient user to

destroy the plaintiff's patent, though put in practice in a spot to which the public had not free access. (*Stead v. Anderson*, 2 W. P. C. 149.)

The question of public user arose in the case of *Heath v. Smith* (2 W. P. C. 268). The patent was one out of which much litigation arose. The invention claimed was an improved method of making cast-steel, by fusing carburet of manganese along with common iron or steel. The pleadings in an action for an infringement of this patent having raised the question of the novelty of the invention, it was proved at the trial that five manufacturers of steel had used substantially the process patented by the plaintiff before the date of his patent, not by way of experiment, but in the way of their trade, and to the extent of hundreds of tons. Two of the manufacturers had kept the process a secret. The other three had openly practised it; but it had not become generally known, and the trade was not made acquainted with it until the plaintiff took out his patent. It was held, after argument, by the Court of Queen's Bench, that there had been a public use of the process, and that the patent was therefore invalid. One of the judges pointed out this consequence of an opposite decision, that a man who made a discovery would be obliged to take out a patent for it in order to free himself from liability to action in the event of another man making the same discovery and procuring a patent. The process adopted by the five manufacturers was to place iron, manganese, and carbon in a crucible. The application of heat, according to the scientific witnesses, made first a carburet of manganese, and then made that substance unite with the iron. Now the Court of Exchequer Chamber had

previously held that this process was an infringement of the patent, the specification of which claimed "the use of carburet of manganese in any process for the conversion of iron into cast-steel;" for although the plaintiff only mentioned carburet as a well-known substance which he put into the crucible, his patent was held to cover every mode of operating whereby carburet of manganese, however formed, was made to act upon iron. The result by the two processes was identical. The process used by Smith, the defendant in this action, was similar to that of the five manufacturers. If it was the same as the plaintiff's, he had a good defence; for the process was not new, and the plaintiff's patent was invalid: if it was not the same as the plaintiff's, then there was no infringement.

The point whether prior *secret* user is sufficient to vitiate a patent has never been judicially decided; but we have a dictum of Mr. Justice Erle, uttered in the above case of *Heath v. Smith*—"If one party only," said that learned judge, "had used the process, and had brought out the article for profit, and kept the method entirely secret, I am not prepared to say that then the patent would have been valid."

It may here be stated that when previous public user of the invention is relied upon as ground of the invalidity of a patent, it is not necessary to show that such user continued up to the time of the patent being granted. Even if discontinued, the patent will be invalidated. (*House of Lords, The Househill Co. v. Neilson*, W. P. C. 1. 709.) Their lordships, however, in delivering judgment in this case, expressly left it an open question, whether, if an invention had been formerly used and abandoned many years before, and the whole

thing had been lost sight of, the patent would or would not stand.

PRIOR USER BY INVENTOR.

We now come to a series of cases which declare the law with regard to a user of the patented invention before the date of the patent—not by other persons than the patentee, but by the patentee himself. If such a user by the patentee be tantamount to a publication of the invention, then the patent is just as invalid as if the invention had been publicly exercised by others. What, then, is the kind of user which will have this fatal effect upon the patent privilege?

In *Bramah v. Hardcastle* (Holroyd, 81), which was an action for infringing a patent for a water-closet, it appeared that the patentee had made two or three of these machines before he obtained his patent; but it was admitted that this fact would not of itself invalidate the patent.

If, however, the article has been manufactured for sale and offered for sale, although not sold, this will be such a user of the invention as will render a subsequently obtained patent bad. (*Oxley v. Holden*, 8 C. B. N. S. 666.)

But where delay occurs in the issue of a patent without the patentee's fault, the manufacture of articles before the date of the patent for the purpose of being sold after the date will not render the patent invalid. (*Betts v. Menzies*, 4 Jur. N. S. 477.)

In *Wood v. Zimmer* (Holt, N. P. 57), it appeared in evidence that a great quantity of verdigris made according to the patented process had been sold by the inventor in the course of four months before the patent

was obtained, and *Gibbs, C. J.*, held that "the public sale of that which is afterwards made the subject of a patent, though sold by the inventor only, makes the patent void."

In *Morgan v. Seaward* (W. P. C. 1. 194), an action which arose out of Galloway's patent for improvements in machinery for propelling vessels, which consisted in an improved method of constructing paddle-wheels, it was given in evidence that before the date of the patent, Curtis, an engineer, made for Morgan, the managing director of the Venice and Trieste Company, two pairs of wheels, upon the principle mentioned in the patent, at his own factory. Galloway, the patentee, gave 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, which carried on its transactions abroad, but had shareholders in England. Curtis deposed that they were sold to the company, without saying by whom, which may mean that they were sold by Curtis to Morgan for the company, and Morgan paid Curtis for them. Morgan and Galloway employed an attorney, who entered a *caveat* against any other patent on the 2nd of March, and afterwards solicited the patent in question, which was dated the 22nd of July, 1829, granted to Galloway, the inventor, and assigned by him to Morgan. Upon these facts it was contended, in an action against Seaward and others,

for an infringement of the patent, that the invention, at the date of the letters patent, was not new, in the legal sense of that word. *Parke, B.*, delivered the judgment of the Court of Exchequer, before whom the point was argued, in these words :—“The word ‘manufacture’ in the statute must be construed in one of two ways: it may mean the machine when completed, or the mode of constructing the machine. If it mean the former, undoubtedly there has been no use of the machine, as a machine, in England, either by the patentee himself or any other person; nor, indeed, any use of the machine in a foreign country before the date of the patent. If the term ‘manufacture’ be construed to mean ‘the mode of constructing the machine,’ there has been no use or exercise of it in England, in any sense which can be called ‘public.’ The wheels were constructed under the direction of the inventor, by an engineer and his servants, with an injunction of secrecy, on the express ground that the inventor was about to take out a patent, and that injunction was observed; and this makes the case, so far, the same as if they had been constructed by the inventor’s own hands, in his own private workshop, and no third person had seen them whilst in progress. The operation, indeed, was disclosed to the plaintiff Morgan; but there is sufficient evidence that Morgan at that time was connected with the inventor, and designing to take a share in the patent. A disclosure of the nature of the invention to such a person under such circumstances must surely be considered private and confidential. The only remaining circumstance is, that Morgan paid for the machines, with the privity of Galloway, on behalf of the steam company; but there

was no proof that he paid more than the price of the machines, as for ordinary work of that description; and the jury would also be well warranted in finding that he did so with the intention that the machine should be used abroad only by this company, which, as it carried on its transactions in a foreign country, may be considered as a foreign company; and the question is, whether this solitary transaction, without any gain being proved to be derived thereby to the patentee or to the plaintiff, be a use or exercise in England of the mode of construction in any sense which can be deemed a use by others, or a public use, within the meaning of the statute and the patent. We think not. It must be admitted that if the patentee himself had, before his patent, constructed machines for sale, as an article of commerce, for gain to himself, and been in the practice of selling them publicly—that is, to any one of the public who would buy—the invention would not be new at the date of the patent. This was laid down in the case of *Wood v. Zimmer*, and appears to be founded on reason; for if the inventor could sell his invention, keeping the secret to himself, and when it was likely to be discovered by another, take out a patent, he might have practically a monopoly for a much longer period than fourteen years. Nor are we prepared to say that if such a sale was of articles that were only fit for a foreign market, or to be used abroad, it would make any difference; not 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 defeated 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 a sale to any individual of the public who might wish to buy ; in which it does not appear that the patentee has sold the article, or is to derive any profit from the construction of his machine, nor that Morgan himself is; and in which the pecuniary payment may be referred merely to an ordinary compensation for the 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 copartners 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."

Adamson invented certain machinery whilst engaged in the execution of a contract for the erection of a pier. This machinery he used on the works for some months before he applied for a patent, and during this time the public had access to it. It was held that there had been public user, and that he was not entitled to a patent. (*Re Adamson's patent*, 6 De Gex, Mac. & Gord. 420 ; S. C. 25 L. J. Ch. 456.)

From these cases it is evident that an inventor intending to patent his invention should be extremely cautious how he deals with his invention previous to his obtaining the patent. An inventor may, it seems, safely deposit his invention in a public room, with a

view to having its qualities tested. (*Bentley v. Fleming*, 1 C. & K. 587.)

It was decided by the House of Lords, in the case of *Brown v. Annandale* (W. P. C. 1. 433), affirming the decision of *Roebuck v. Stirling* (W. P. C. 1. 45), that the public use of an invention in England, prior to the date of letters patent in Scotland, renders such letters patent void, although the invention was new as regards Scotland. If this decision were followed out to its logical consequences, the public use of an invention in any one of our colonies, however remote or obscure, would invalidate a patent subsequently granted to an original inventor in England in respect of a similar invention. Previous to the Patent Law Amendment Act, 1852 (15 & 16 Vict. c. 83), separate letters patent were required for each of the three kingdoms of England, Scotland, and Ireland, when it was intended to secure invention throughout the United Kingdom. By the usual practice, such letters patent were seldom, if ever, dated the same day, whilst the law declared that the specifications, constituting the publication of the invention, should relate back to the date of the letters patent. Hence it was sometimes doubted whether two of the letters patent were not invalidated by reason of their being dated after the first. But now, by the 18th section of that statute, it is enacted that all letters patent passed in conformity with the provisions of that Act shall extend to the whole of the United Kingdom of Great Britain and Ireland, the Channel Islands, and the Isle of Man, and, if the royal warrant directs, to the Colonies.

Where an English patent was dated in 1849 and Scotch and Irish patents for the same invention in 1853,

an objection that the Scotch and Irish patents were rendered void by the user in England, was held insufficient (having regard to the enactment above mentioned) to induce the Judicial Committee of the Privy Council to abstain from granting a prolongation of the three patents. (*Bovill's patent*, 1 Moo. P. C. C. n. s. 349.)

EXPERIMENTS.

But it is well-settled law, that when the disclosure of the secret took place only during the course of trying experiments, with a view to improve and test the invention, this will not vitiate the inventor's right to a patent. Nor will the previous experiments of other persons have that effect, if such experiments did not result in the realization of the discovery. Few patents, indeed, could be sustained if previous experiments, approaching the patented invention, were held to vitiate them. In almost every case experiments of some kind or other have been made in the same track, and many beneficial inventions have been but a step beyond what has before been reached by experiments which seemed fruitless, and were abandoned.

In *Galloway v. Bleaden* (W. P. C. 1. 525), *Tindal, C. J.*, said, "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." His lordship, with reference to the case before him, afterwards remarked, "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 on 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, so far as his predecessors have gone, of their discoveries, and add the last link of improvement in bringing it to perfection." See also the observations of the same learned judge in *Cornish v. Keene* (W. P. C. 1. 508).

In *Jones v. Pearce* (W. P. C. 1. 124), an action brought for an infringement of a patent for an improved construction of carriage-wheels, it was contended, on behalf of the defendants, that the invention was not new, wheels similar in principle to those for which a patent had been obtained having been invented by a Mr. Strutt several years previously, made under his orders, and used in a cart employed to convey heavy loads of stones on the public roads for upwards of a year. These wheels were afterwards laid by, the spokes having occasionally got bent. *Patteson, J.*, told the jury, that if Strutt's wheel was, in substance, the same wheel as the patentee's, and if it had been "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

* This part of the learned judge's charge cannot be considered law since the decision of the House of Lords in *The Househill Co. v. Neilson*. (*ante* p. 53.)

be a ground to say that the plaintiff's invention is not new. But if, on the other hand, you are of opinion that Mr. Strutt's was an experiment, and that he found it did not answer, and ceased to use it altogether, and abandoned it as useless, and nobody else followed it up, and that the plaintiff's invention, which came afterwards, was his own invention, and remedied the defects of Mr. Strutt's wheel, then there is no reason for saying that the plaintiff's patent is not good."

The question whether the evidence amounts to proof of public use, or whether it only proves that abandoned experiments had been made, is frequently of considerable delicacy ; since, as it has been remarked from the Bench, 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. (*Cornish v. Keene*, W. P. C. 1. 519.)

On the trial of an action for infringing a patent for improvements in cards for carding fibrous substances, which improvements consisted in using caoutchouc as a substitute for leather as an elastic bed in which the teeth were fixed, it was given in evidence, in support of a plea denying the novelty of the invention, that a certain material, called Hancock's patent leather, had been made and sold previous to the patent ; and it was suggested, rather than proved, that this material was substantially the same thing as the elastic bed in which the carding teeth were fixed. It appeared that the patent leather had been supplied to certain manufacturing firms, during the space of about a year and a half, several years before the date of the patent, and that it had been used in the construction of cards, but had not been employed for that purpose since that

time. "Supposing," said *Cresswell, J.*, to the jury, "that the article (Hancock's patent leather) did embody the principle of the plaintiff, so as to present to persons using it the properties, qualities, and advantages in principle of that article which the plaintiff makes, the question for you will be, whether that user is not to be considered rather in the nature of an experiment than of any public use of the article, so as to deprive the plaintiff of the fruit of his discovery in respect of this manufacture" (*Walton v. Bateman*, W. P. C. 1. 619).

At the trial of *Stead v. Williams* (2 W. P. C. 135), *Cresswell, J.*, said to the jury, "I take it that there is a great difference between the knowledge of an invention as a thing that would answer and was in use, and the knowledge of it as a mere experiment that had been found to be a failure, and thrown aside. If a person has had a scheme in his head and has carried it out, but after a trial has thrown it aside, and the thing is forgotten and gone by, then another person re-introducing it may, within the meaning of the Act, be the inventor and the first user of it, so as to justify a patent."

Where an experiment performed in the presence of others is not only successful, but is actually of benefit to the inventor, it will not necessarily be held that he has given the invention to the world. But if on subsequent occasions he uses his invention and needlessly delays his application for a patent, then it will be supposed that he has dedicated it to the public. (*Re Newall and Elliot*, 4 C. B. n. s. 269; *S. C.* 4 Jur. n. s. 562.)

In *Hills v. London Gas Light Co.* (5 Hurlst. and Norm. 312), it appeared that one Croll had purified many thousand feet of gas by a mode for which Hills

subsequently obtained a patent, and this gas was sold. The jury, on the trial of an action brought by Hills for the infringement of his patent, found that this was by way of experiment, and the Court refused to disturb the verdict. In delivering judgment on the defendants' rule for a new trial, the Court said, "the word 'experiment,' in the cases referred to, has been used, not as the sole test upon a matter of this sort, but as indicating a class of practice, and for the purpose of showing that if there has been a user of an invention not of a substantial character, but in the character of an experiment, then, although the thing has been done before, it does not preclude a person from taking out a patent for it; so that although what Croll did may not have been strictly in the nature of an experiment, still the jury have so found it, and we cannot grant a new trial."

We will now adduce some instances of patents which were adjudged bad on the ground of want of novelty in the invention generally.

Brunton took out a patent for (amongst other things) an alleged improvement in anchors. The two flukes were made in one, and had such a thickness of metal in the middle, that they might there be pierced with a hole for the insertion of the shank. Previously, the two flukes had been joined by welding them to the shank. It came out on a trial in Court, that the real improvement was in the avoidance of welding, and that this was done by means perfectly well-known in other cases. *There was no proof that the anchors made by the new process were better than those previously made, and since the invention seemed to be nothing more than the*

adoption of a known operation practised in analogous cases, it was held not patentable. (*Brunton v. Hawkes*, 4 B. & Ald. 540.) “Now” (said *Abbott, C. J.*, in his judgment) “a patent for a machine, each part of which was in use before, but in which the combination of different parts is new and a new result is produced, is good, because there is novelty in the combination. But here the case is perfectly different: formerly three pieces were united together; the plaintiff (*Brunton*) only unites two; and if the union of these two had been effected in a mode unknown before, as applied in any degree to similar purposes, I should have thought it a good ground for a patent; but unfortunately the mode was well known and long practised. I think that a man cannot be entitled to a patent for uniting two things instead of three, where that union is effected in a mode well known and long practised for a similar purpose.” (*Brunton v. Hawkes*, 1 Carp. Rep. 410.)

In the case of *Kay v. Marshall* (2 W. P. C. 34-84), it appeared that *Kay* had procured a patent for new and improved machinery for preparing and spinning flax, and the invention was declared in the specification to consist of new machinery for macerating flax previous to drawing and spinning it, which is called preparing it; and also for improved machinery for spinning the same after having been so prepared. If the patent had been confined to the new machinery for macerating, it was allowed that it would have been perfectly good; but, as to the second part of the invention, it appeared that the improved machinery was nothing more than the placing of certain portions of a machine well known and in common use within two

inches and a half of each other, instead of at a greater distance. It was shown that the distances between the parts in question had not been fixed in previous machines, but had been varied according to circumstances; and, further, that the reach used in *cotton* spinning had actually been less than two inches and a half. It was held by the Court of Common Pleas, that the adoption of a particular distance, viz. two inches and a half, under these circumstances, did not constitute such an invention as would support a patent. "Suppose," said *Tindal, C. J.*, on delivering judgment — "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 improved mode of machinery in spinning flax which consisted of nothing more than the spinning of short staple of flax by a spinning machine of 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." Or, as *Lord Cottenham* put it in the House of Lords, if the plaintiff (*Kay*) has a right to tell the rest of the world that they shall not use the common spinning machine with rollers at two and a half inches' distance, then the existence of the patent deprives all the rest of the world of the right of using the ordinary spinning machine in the form in which they had a right to use it before the patent was granted.

In the process of calendering woven fabrics the use of a roller and a bowl, and the means of regulating the relative speed of their motions, were well known.

In the process of *calendering*, the roller was smooth, and the speed of the roller and bowl was unequal. In *embossing*, the roller had a pattern upon it, and the relative speed of the roller and bowl was equal. A patent was taken out for a combination of a patterned roller with a roller and bowl moving at unequal speeds. The invention was held not to be a 'new manufacture' which could be the subject of a valid patent. (*Ralston v. Smith*, 9 C. B. n. s. 117; affirmed by the *House of Lords*, 13 L. T. n. s. 1.)

The casting of tubular boilers in one piece, similar boilers having been previously made in several pieces which were afterwards fastened together by means of cement, was held not to be an invention for which a valid patent could be obtained, although the result was useful and beneficial to the public. It was only the application of a well-known article by a well-known process to the production of a well-known article, to which that article and process had not before been applied. (*Ormson v. Clark*, 13 C. B. n. s. 337; *S. C.* in error, 14 C. B. n. s. 475; 10 Jur. n. s. 128.)

Again, the application of double-angle iron (a well-known article of commerce already applied to a variety of purposes) to the construction of hydraulic joints of telescopic gas-holders, instead of making them of two pieces of *single-angle* iron attached to a plate, was held not to be patentable. It was not a claim for a new article or for an improved article, but only for a cheaper way of using known materials. (*Horton v. Mabon*, 12 C. B. n. s. 437; *S. C.* in error, 16 C. B. n. s. 141.)

From what was said in *Mackelcan v. Rennie* (13 C. B. n. s. 61), it would appear that the court considered that the application in the construction of a known ap-

paratus of a material not before used for that purpose, for example, iron instead of timber in the construction of floating docks, was not an invention for which a valid patent would be obtained. (See also *Thompson v. James*, 32 Beav. 570.)

In the case of *Losh v. Hague* (W. P. C. 1. 202), the question was reduced to this—Is a man who finds a particular construction of wheel already in use on ordinary roads entitled to a patent for applying it to a railway, such application not having been previously made? *Lord Abinger* remarked, in deciding that he was not entitled to a patent for such an application, that you cannot have a patent for applying a well-known thing, capable of being applied to fifty thousand different purposes, to an operation which is exactly analogous to what was done before. His lordship put this case—“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?” Again—“It would be a very extraordinary thing to say, that after 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.”

In an action brought by the assignee of a patent for improvements in separating the fibres of cocoa-nut husks, for an alleged infringement, it was shown that the principal part of the invention consisted in passing the split husks between crushing rollers, and that, for some time previous to the date of the patent, similar rollers had been employed in treating hemp. *Lord Campbell*, who presided at the trial, told the jury that

the use of the crushing rollers having been thus anticipated, no claim for their application to the crushing of cocoa-nut husks would hold good. (*Hyde v. Trent*, Newton's Lond. Jour. vol. 45, p. 135.)

So, in the case of the *Queen v. Cutler* (Macrory's Pat. Ca. 124-138), it was held by two judges on different occasions, that the mere application of a known article to a new use, the mode of application not being new, but having been previously used in applying analogous articles to the same purpose, cannot be made the subject of a patent. In this case the patent was for improvements in the construction of the tubular flues of steam boilers. The specification claimed the application of iron tubes coated with copper or brass to this purpose. This kind of tube was not new; nor was there any novelty in the way the patentee applied the tubes in the formation of flues, uncovered tubes having been previously used in a similar way.

In *The Bottle Envelope Co. v. Seymour* (5 C. B. N. S. 164; S. C. 5 Jur. N. S. 174), it was held that the use of a model or mandril in the form of a bottle in making envelopes for bottles out of rushes or straw, could not be the subject of a patent, this being merely the application of a well-known tool to work previously untried materials or to produce new forms. And in *Tetley v. Easton* (2 C. B. N. S. 706) it was decided that the discovery that a particular advantage may be obtained by the use of a known machine used in a known manner cannot be made the subject of a patent.

On the trial at *Nisi Prius* of *Bush v. Fox* (Macrory's Pat. Ca. 163), it appeared that the invention, for an infringement of which the action was brought, consisted in the new application of a machine previously known

and applied to another purpose. "I think that an invention" (said *Pollock, C. B.*, to the jury) "must be a production of something that can be used or sold, or made use of for some purpose, or some method which results in something of the same sort. And I think that a man cannot, if he has applied—supposing this to be a *new* application—an old invention, or part of an old invention, to a new purpose, obtain a patent for such an invention. Both the plaintiff and the other witness say that the invention consists in the application, and not in the novelty of the thing itself—in other words, that the only novelty is in the application of the apparatus. I think that a patent cannot be taken out for such an application. If a man were to take out a patent for a telescope to be used to make observations on land, I do not think any one could say, 'I will take out another patent for that telescope to be used for making observations on the sea.'" When the legal points raised at the trial were argued in the Exchequer Chamber, *Maule, J.*, said, "Assuming that the machine itself is old, the learned judge held that a mere new application is not a new manufacture, and therefore not the subject of a patent; and my present opinion is, that, on the evidence, he was right in so directing the jury" (*Macrory's Pat. Ca.* 175). The case having been taken to the House of Lords (*Macr. P. C.* 179), it was there held that the judge who tried the case had rightly decided that the invention was not a patentable one. The Lord Chancellor (*Lord Cranworth*) added, that the judge who tried the case might, simply by comparison, and on his own construction of the specifications, without other evidence, have directed a verdict for the defendant.

In *Brook v. Aston* (8 E. and B. 478), the plaintiffs had obtained a verdict at *Nisi Prius* in an action for an infringement of their patent granted in February, 1856, for improvements in finishing yarns of wool and hair, and in the finishing of woollen fabrics and piece goods; but the defendant obtained leave to move to enter the verdict in his favour if the court should be of opinion that the patent was invalid. It appeared that the plaintiff had obtained a patent in November, 1853, for a process precisely similar except that it was applicable to the finishing of cotton and linen yarns. After argument, the court held that this being only the application of an old machine to a new purpose, there had been no improvement or discovery for which a patent could be obtained. The alleged invention under the second patent was destitute of novelty, being merely the application to woollen and hair yarn of the machine previously patented and then applied to cotton and linen yarn. This decision was affirmed by the Court of Exchequer Chamber (5 Jur. n. s. 1025).

The case of *Harwood v. The Great Northern Railway Company* (2 B. & S. 194; affirmed by the *House of Lords*, 12 L. T. n. s. 771), may also be consulted with reference to the same point. In this case a patent for the application of "fishes" to iron rails for railways, for the purpose of securing them, was held invalid, because a similar contrivance had been applied to fasten pieces of timber together in the construction of bridges, and had also been used in various articles of machinery.

So, in *Calvert v. Ashburn* (Prac. Mech. Jour., vol. 7, 2nd ser., 97), it was held that the application of

caustic alkalies for the purpose of dissolving the gluten contained in flour employed in the manufacture of *size* could not be the subject of a patent, inasmuch as caustic alkalies had been previously used for the purpose of dissolving gluten in the manufacture of *starch*.

It would seem, however, from the case of *Young v. Fernie* (5 Giff. 597, 612), that the doctrine above laid down is not necessarily applicable to all patents for chemical inventions. In that case, which was a suit for an injunction to restrain the infringement of a patent for obtaining paraffin oil by the distillation of bituminous *coals*, it was proved that previously to the plaintiff's invention paraffin oil had been extracted from bituminous *shale* by distillation, and it was argued for the defendants, on the authority of *The Queen v. Cutler*, *Brook v. Aston* and such cases, that bituminous shale being a substance analogous to bituminous coal, the invention of the plaintiff was not in law the subject of a patent. But *Stuart, V. C.*, said that there seemed to be no analogy between the cases cited and the present one, because, if the doctrine laid down there were to be adopted implicitly as to chemical subjects, it would be impossible to foretell results. And in giving judgment in favour of the validity of the patent, his Honour observed, "The principle on which the present case should be decided is, to my mind, so clear that it is unnecessary to examine the cases cited by the defendant's counsel. Inventions in mechanics are as widely different from inventions in economical chemistry as the laws and operations of mechanical forces differ from the laws of chemical affinities, and the results of analysis and experiment in the comparatively infant science of chemistry with its bound-

less field of undiscovered laws and undiscovered substances. This observation as applied to reported cases will strike the mind of every lawyer who has even a slight elementary knowledge of both sciences.”

In an action for an infringement of plaintiff's patent for a method of paving streets with blocks in the form of two solid rhombs placed one in front of the other in opposite directions, so that each side of a block was bevelled both inwards and outwards, it was proved that the defendant used blocks, each consisting of a single solid rhomb, and then fastened two together by pins, so that two of the defendant's blocks thus fastened exactly resembled one of the plaintiff's blocks. This was the infringement complained of. The defendant, at the trial, put in the specification of an expired patent, obtained by one M'Arthy, for a pavement in which each block had two bevels inwards and two outwards on the same side. If M'Arthy's block were cut into two, it would make two blocks similar to the plaintiff's; if cut into four, it would make four blocks similar to the defendant's. Both judge and jury thought that, under these circumstances, the plaintiff's invention was destitute of novelty. The plaintiff asserted that the defendant had infringed his patent by cutting his block into two. Granting this to be an infringement, the defendant showed that the plaintiff, in forming his block, had only cut M'Arthy's block into two. The plaintiff, in support of his own patent, was bound to contend that M'Arthy's invention and his own were distinct; but then it followed that his own and the defendant's were likewise distinct, in which case there was no infringement (*Macnamara v. Hulse*, 2 W. P. C. 128).

TRUE AND FIRST INVENTOR.

Having so far examined the decisions which bear upon the question of the *novelty* of the *invention*, we may now turn to those which have reference to the *patentee*, who must, as we have seen, be the *true and first inventor*, or he will not be entitled to hold his patent. A discovery may be both useful and quite new to the world at large; yet if the person who has attempted to secure the benefit of it by patent should not be the inventor, and the first and true inventor, his patent is not saved from the clause in the statute of James, which declares that all monopolies are invalid. Let us therefore inquire what construction the courts have put upon the words, "first and true inventor."

One of the earliest cases on this subject is that of Dollond, the optician, who brought an action for an infringement of his patent for a new method of making the object-glasses of refracting telescopes. It was alleged, on the part of the defendant, that Dollond was not the true and first inventor of the method, inasmuch as Dr. Hall had made the discovery before him. But it was holden that as Dr. Hall had confined it to his closet, and had not communicated it to the public, Dollond was to be considered the first and true inventor as required by the statute. This decision has been frequently mentioned in subsequent cases, and always with approval.

The case was not reported, and our knowledge of it is derived from the mention made of it in the subsequent case of *Boulton v. Bull* (2 H. Bl. 469). Dollond's case was decided in 1766, and it was followed by nu-

merous cases, the result of which may be thus stated :—If two persons make the same invention about the same time independently of each other, he who first obtains a patent has an exclusive right to the invention ; and he will be held the first inventor, although, in point of fact, the date of his invention was subsequent to that of the other person. This rule, however, will not hold where there was such a use of the invention previous to the patent as amounted to what is technically called “ public use.”

“ A man may publish to the world,” said *Tindal, C. J.*, in *Gibson v. Brand* (W. P. C. 1. 628), “ that which is perfectly new in all its uses, and has not before been enjoyed, and yet he may not be 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 another, from the labours and assiduity or ingenuity of another, should be the man who was to receive the benefit of another’s skill.”

There are many substances which have been produced by chemists in their laboratories in small quantities, which, if they could be produced in large quantities so as to be merchantable commodities, would be highly valuable. An inventor who succeeds in doing this will not be considered to have been forestalled because the substance has been already produced on a small scale as a chemical curiosity. He will be held to have been the first and true inventor, and his patent will be supported because he has introduced a new manufacture. “ What the law looks to,” said *Stuart, V. C.*, in the great case of *Young v. Fernie* (5 Giff. 611 ;

S. O. Pract. Mech. Journal, vol. 9, 2d ser., p. 102), "is the inventor and discoverer who finds out and introduces a manufacture which supplies the market for useful and economical purposes with an article which was previously little more than the ornament of a museum. The plaintiff is an inventor of this class, and his patent is entitled to the protection of the law. I find that he has ascertained by a course of laborious experiment a particular class of materials among many, and a particular process among many, which has enabled him to create and introduce to the public a useful manufacture, which amply supplies the market with that which, until the use of the materials and processes and temperature indicated by him, had never been supplied for commercial purposes. At the date of his patent something remained to be ascertained which was necessary for the useful application of the chemical discovery of paraffin and paraffin oil. This brings it within the principle stated by *Westbury, L. C.*, in the case of *Hills v. Evans*.* The manufacture with the materials and process indicated by him according to the sense in which I understand the word 'manufacture' to be used in the statute, was a new manufacture not in use at the date of his patent."

It may happen that a given invention results from the combined operation of two minds, in which case it is necessary that the letters patent should be taken out in their joint names. Patents have sometimes been disputed on the ground that the patentee owed a material part of the invention to another person; and if this can be made out on satisfactory evidence, it is fatal. It must, however, be taken to be undoubted

* Reported 8 Jur. N. S. 525.

law, that the suggestions of workmen employed by the inventor to carry out his ideas will have no such effect. An inventor is entitled to something more than the mere manual labour of the persons he employs. If the substantial part and leading idea, the principle of an invention, belong to one person, he may properly call in the assistance of another to work it out and perfect it; and after enjoying the benefit of that assistance, he may legally procure a patent for the invention. The observations of *Alderson, J.*, to the jury on trying *Minter v. Wells* (W. P. C. 1, 132), will throw light upon this point. "Minter [the patentee] and Sutton [a workman employed by Minter] were together about the time the invention took place: which of the two suggested the invention, and which carried it into effect, is a question for you to decide. If Sutton suggested the principle to Minter, then he would be the inventor. If, on the other hand, Minter suggested the principle to Sutton, and Sutton was assisting him, then Minter would be the first and true inventor, and Sutton would be a machine, so to speak, which Minter uses for the purpose of enabling him to carry his original conception into effect. You will judge which is the more probable of the two. Minter makes out his *primâ facie* case; he is the person who takes out the patent. If Sutton has received a compensation, nothing would have been more simple and easy that he should have taken out the patent, and still Mr. Minter might have had the same benefit to-day; and there is no apparent reason why Sutton should not have taken out the patent which Minter has taken out, unless they were both desirous to ruin the invention; for, suppose two persons are engaged on an in-

vention of this description, they know perfectly well between themselves who is the real inventor of it, and who is the workman to carry into effect the conception; but they would destroy the value of it to both, if they did not take it out in the name of the right person."

In *Bloxam v. Elsee* (Carp. Rep. 1. 434), an action brought for an infringement of a patent for making paper in sheets very much larger than had previously been made, it was objected that many of the improvements set out in the specification were invented, not by the patentees, but by Mr. Donkin, and without them the invention was useless. Mr. Donkin was called, and proved that he was employed by the patentees to bring the machine to perfection, was paid by them for so doing, and was acting as their servant. It was contended, in reply, that these were the patentees' inventions, and that Mr. Donkin was employed by them to carry their ideas into effect in the best manner. This view of the case seems to have been that of the Judge presiding at the trial, and that of the Judges before whom the motion for a nonsuit was argued; for although the patent was declared invalid, it was on other grounds, nothing being said on this point.

In arguing the case of *Jupe v. Pratt* (W. P. C. 1. 144) it was asked by the patentee's counsel—"Is it to be said that if a man has discovered a principle, and goes to a mechanic, and says, 'I think you might do it thus and thus,' is it to be said that that person, who had merely supplied, you might say, the tools or the materials, has a right to claim such invention? Suppose a man not skilled in mechanics were to per-

ceive some obvious inconvenience in any of the common articles of life—a carriage, a vessel, a ship used for particular purposes; and he were to go to a mechanical man, and say, ‘I have for some time had an idea of something that would be an improvement, if such a matter could be achieved. I do not understand mechanics, but the invention is mine.’ Will any man tell me that a man so applied to, and assisting the party in one mode of the hundreds, could be considered as preventing the inventor from taking out a patent with his perfect concurrence?”

“It would be difficult,” said *Tindal, C. J.*, in *Allen v. Rawson* (1 C. B. 551), “to define how far the suggestions of a workman employed in the construction of a machine are to be considered as distinct inventions by him, so as to avoid a patent incorporating them taken out by his employer. Each case must depend upon its own merits. But when we see that the principle and object of an invention are complete without it, I think it is too much that a suggestion of a workman employed in the course of the experiments, of something calculated more easily to carry into effect the conceptions of the inventor, the use of such a suggestion will not render the patent void.” And some observations of *Cresswell, J.*, in the same case, are relevant to this subject. “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 ex-

tending 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."

This is a very different case, however, from that where the patentee has no closer connection with the invention than that of being the employer of the inventor. Thus, in Arkwright's case, it appeared that Arkwright, the patentee, had been told of a particular roller, part of the machinery by Kay, and that, perceiving the value of the invention, he took Kay into his service for two years, during which time he employed him to make models, and subsequently claimed the invention as his own, making it the foundation of a patent. Arkwright adopted in the same way a crank invented by Hargrave. In the face of this evidence, Arkwright's claim to be the first and true inventor fell to the ground. (*The King v. Arkwright*, Dav. P. C. 61; W. P. C. 1. 64.) The case of *Barker v. Shaw* (W. P. C. 1. 126) touches the same point. In an action for the infringement of a patent for an improvement in making hats, a witness proved that he had made the improvement whilst employed in the patentee's workshop, whereupon the plaintiff was nonsuited.

In these cases, it was clear that the patentee was not the first and true inventor, since the source of the invention could be traced elsewhere. Whenever this can be done (except in the case of an invention imported from abroad, and acknowledged to be such), the patentee's right to his patent fails. It is so, as we have seen, although the real inventor should be in the service of the patentee; and, *à fortiori*, will it be

so, where there is still less connection between them. In Tennant's case, it was proved that, before the grant of the patent, conversations had taken place between Tennant (the patentee) and a chemist, who had suggested to Tennant the basis of the patented improvement. This piece of evidence, in addition to slight evidence of user, induced the Court to nonsuit the plaintiff. (Dav. P. C. 429.)

PUBLICATION IN PRINTED BOOKS.

It has been repeatedly held that an inventor's claim to novelty is destroyed by showing the previous publication of the invention in some printed book in use in Great Britain, or in the specification of a previous patent. *Mr. Justice Buller*, in *King v. Arkwright* (W. P. C. 1. 72), said :—"It is admitted that this is not a new discovery ; for Emmerson's book was produced, which was printed a third time in the year 1773, and that is precisely the same as this." 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, he cannot claim the benefit of his patent. (*Lord Ellenborough*, in *Huddart v. Grimshaw*, W. P. C. 1. 86.) "Although" (said *Tindal, C. J.*, in *Cornish v. Keene*, W. P. C. 1. 507) "it is proved that the invention is a new discovery, so far as the world is concerned, yet if anybody has been able to show, that although that was new—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 printed in England, and which was open to all the world—then it would become an

important question whether he was the first and original inventor of it." In *Jones v. Berger* (W. P. C. 1. 550), it had been alleged that the principle of the invention was not new, having been the subject of former patents, and contained in published books; whereupon *Maule, J.*, remarked, "I think it is an objection to a patent, and not evidence simply of an objection, that there has been a previous patent and specification enrolled containing the invention. In the same way, I think it is an objection to a patent that it has been published in such a book." In the course of the argument of the case of *The Househill Company v. Neilson* (W. P. C. 1. 673), an appeal from the Court of Session in Scotland to the House of Lords, *Lyndhurst, L. C.*, asked, "If the machine is published in a book, distinctly and closely described, corresponding with the description in the specification of the patent, though it has never been actually worked, is not that an answer to the patent? It is continually the practice, on trials for patents, to read out of printed books, without reference to anything that has been done." And *Lord Brougham* added, "It negatives being the true and first inventor. It must not be a foreign book, but published in England." (W. P. C. 1. 718.)

The law, however, has been since interpreted somewhat differently from what is laid down in this last sentence. If the foreign book, containing a description of an invention, has been circulated in England (*Reg. v. Steiner*, *Newton's Lond. Jour.* vol. 40, p. 71), or even if the foreign book is sent over to a bookseller in this country, and is by him simply offered for sale (*Lang v. Gisborne*, 31 Beav. 133), a patent subsequently obtained by an independent inventor is invalid.

It seems from *Heurteloup's Patent* (W. P. C. 1. 553), to have been thought that the deposit of a foreign work in the British Museum, which work contained the specification of a French patent for an invention, in great part the same as that for which a patent had subsequently been obtained in England, was sufficient to vitiate the latter patent on the ground of want of novelty.

It may be inferred from some of the preceding cases, that when the validity of a patent is contested on the ground of the invention having been previously in public use, or communicated to the world by a book, it is not necessary to show that the patentee derived his knowledge of the invention from such user, or book. And it was expressly decided, in *Stead v. Williams* (2 W. P. C. 142), that 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 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 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.

PUBLICATION IN THE SPECIFICATION UNDER A PRIOR PATENT.

The law as regards the publication of the invention in the specification under a prior patent, is precisely the same as that with reference to a publication in a printed book. The invention has been deprived of its requisite attribute of novelty if it has been described in a previous specification, whether the patent has or has not expired. But if the prior inventor has not shown how the invention is to be practically carried out, and an independent inventor does this and fully explains the mode in which the result is obtainable, his patent will be held good. It will be considered that he has been the first to carry the invention to a useful result, although his patent was granted after another one by which a similar object was sought to be effected. (*Betts v. Menzies*, 10 H. L. C. 117, S. C. 9 Jur. n. s. 29. See also *Betts v. De Vitre*, 11 L. T. n. s. 445.)

The antecedent exposition of an invention which will have the effect of depriving a subsequently patented invention of the attribute of novelty, must (according to *Westbury, L. C.*, in *Hills v. Evans*, 8 Jur. n. s. p. 529) "be such that a person of ordinary knowledge of the subject would at once perceive, understand, and be able practically to apply the discovery, without making experiments for the purpose of gaining further information, before the invention can be made useful. If anything remains to be ascertained which is necessary for the useful application of the discovery, that affords sufficient room for another valid patent. . . . The information as to the alleged in-

vention given by the prior publication must, for the purposes of practical utility, be equal to that given by the subsequent patent. The invention must be shown to have been before made known. Whatever therefore is essential to the invention must be read out of the prior publication. If specific details are necessary for the practical working and real utility of the alleged invention, they must be found substantially in the prior publication. Apparent generality, or a proposition not true to its full extent, will not prejudice a subsequent statement which is limited, accurate, and a specific rule of practical application." And in the above-cited case of *Betts v. Menzies* the same learned judge said (10 H. L. C. 152), "Even if there is identity of language in two specifications, and (remembering that those specifications describe external objects) even if the language is *verbatim* the same, yet if there are terms of art found in the one specification, and also terms of art found in the other specification, it is impossible to predicate of the two with certainty, that they describe the same identical external object, unless you ascertain that the terms of art used in the one have precisely the same signification, and denote the same external objects at the date of the one specification as they do at the date of the other."

The hardship of depriving a *bonâ fide* inventor of the benefit of his patent, by merely showing that some other individual had invented or used the invention before the date of the patent, seemed so great that the Legislature interposed, by the 2nd sect. of the 5th and 6th Will. IV. c. 83, of which we shall speak more fully in the chapter on the Confirmation of Letters Patent.

CHAPTER IV.

WHO MAY BE A PATENTEE.

THE reader has already been made acquainted with the fact, that the law requires the grantee of letters patent to be the true and first inventor of the thing in respect of which they were obtained; and we have discussed, in preceding pages, the question—Who is to be considered a true and first inventor? The strict letter of the statute has been so far relaxed as to allow persons simply importing an invention from a foreign country into this realm to obtain a patent in respect of it, provided that such an invention is new and useful, which words are to be interpreted in precisely the same way, whether it is imported, or whether it is discovered within the limits of the British empire. In other words, the administrators of the law always read the word “inventor,” in the statute, as embracing an importer.

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 In *Carpenter v. Smith* (W. P. C. 1. 535), Lord Abinger said, “A man has a right to a patent, not only for his own original invention, but he has a right to a patent, if he is the first person who brings into England an invention which is used abroad and not known in England; if, therefore, any person was to import from America a machine, and have that machine used in England, and was to buy considerable quantities of them, no other person could take out a patent for that, because it is a machine used abroad, and a man

might have a patent taken out for it, if he is the original inventor of it."

Whilst a patent taken out by a British subject for an invention communicated by a foreigner residing abroad is perfectly unobjectionable, there seems reason to doubt whether a patent taken out by a British subject, in respect of an invention derived from an alien permanently domiciled in Britain, would be held valid. It has been decided that an alien, subject of a country with which we are at amity, may well be the grantee of a patent privilege, and that the grant may either be taken in his own name or in the name of another in trust for him. (*Beard v. Egerton*, 3 C. B. Rep. 97.) It has now become a very common practice to grant patents to British subjects resident in Great Britain in respect of inventions communicated from abroad. If the grantee is the agent for the foreign inventor, the letters patent are subsequently assigned to the latter or his nominee.

If a patentee has stated in his petition that he was the true and first inventor, when in reality the subject-matter was communicated to him by a British subject resident abroad, the patent is void. (*Milligan v. Marsh*, 2 Jur. N. S. 1083.) So also when an invention is partly original and partly communicated from abroad, it seems that the latter part should be distinguished in the specification. (*Renard v. Levinstein*, 10 L. T. N. S. 177.)

When two contending applicants for a patent claim to be independent contemporaneous discoverers, the law-officer usually refuses to allow the grant to issue to either separately, but offers it to the two jointly. However, in a case where two persons were engaged

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in making experiments with regard to the propulsion of vessels, and something occurred which suggested an improvement to both, whereupon they communicated their ideas to each other, and at the end of two years one of them applied for a patent, which was opposed by the other; it was held by *Lord Cramworth, C.*, that the first applicant could not be prevented by the other from obtaining a patent, although there was no doubt that it might be repealed by *scire facias*. (*Lowe's Patent*, 25 L. J. Ch. 454.)

Where it appeared that a master and his foreman had severally invented certain improvements for which the former applied for a patent, the grant being opposed by the foreman, it was held that the patent should only issue upon the master undertaking to hold the same as trustee for both. (*Re Russell's Patent*. 2 De G. & J. 130.) In the same case it was said that where a matter is in much doubt, the court, rather than withhold the Great Seal from a patent, will run the risk of putting the party opposing to the costs of opposing ulterior proceedings, since the one course might cause an irremediable injury, the other a remediable one. See also *Re Spence's Patent* (32 L. T. 326), where *Lord Chelmsford, C.*, said he would not refuse to seal a patent unless it could be shown that it would certainly be bad. And see *Re Tolson's Patent* (6 De G. M. & G. 422).

Where a patent is granted to two or more persons, each may work the invention for his own benefit without being liable to account to the others. (*Mathers v. Green*, 1 Law Rep. Ch. Ap. 29.)

The 21st section of the Patent Law Amendment Act, 1852, provides that where the applicant for letters

patent dies during the continuance of the provisional protection, or the protection by reason of the deposit of a complete specification, as the case may be, such letters patent may be granted to the executors or administrators of such applicant at any time within three months after his death, whether the time of provisional protection has expired or not; and the executors or administrators of a patentee who did not file a complete specification along with his petition, and died before the filing of the specification required by the letters patent, are permitted to file a specification under the clause usually contained in letters patent which embraces the inventor's executors and administrators.

CHAPTER V.

THE TITLE.

WHEN an inventor prepares his petition to the Crown, praying for a grant of letters patent, he describes, in general terms, the nature of his invention; and this description, being transferred into the letters patent, is called the Title of the patent.

It is of great importance that the inventor should rightly frame his title, as many patents have been lost by inattention in this particular. Though the rules of the Commissioners of Patents require that the title should point out distinctly and specifically the nature and object of the invention, it is advisable to disclose the invention in as general terms as may be allowed, for two reasons: First, lest other persons who were about to specify should obtain a clue to it, and frame their specification so as to deprive the real inventor of the priority and the reward which are his right. Secondly, that the title may not disclose to any rival inventor, or manufacturer, information which may be used to the prejudice of the inventor, should his application for the patent be opposed. Instances of the nature referred to are not, it is true, of common occurrence; but they have occurred, and it is most desirable that an inventor should be cautious as to the language he uses. If the title is too general,—that is to say, if it extends to matters not included by the invention;—the patent is bad; and if, on the other hand,

it is too narrow, it excludes, by its very terms, something which the inventor had a right to secure the monopoly of.

The inventor must carefully avoid the use of language which will mislead. If the title bears evidence upon its face of an intention to deceive the public as to the subject-matter of the invention, this is a point which may be urged before a jury with fatal effect, for their opinion may be taken as to the existence of such an intention. (*Cook v. Pearce*, 8 Q. B. 1044.)

To show the importance of framing an accurate title, we will cite a few instances where patents were vitiated by a blunder at the very beginning.

The title of the invention spoke of a *tapering* brush; the specification disclosed the invention of a brush, in which the bristles were of an unequal length, but there was no tapering to a point. The patent was held bad. (*Rex v. Metcalf*, 2 Stark. R. 249.)

The title was, "A new and improved method of drying and preparing malt;" but the invention specified was a process of producing a colouring-matter for beer, by submitting malt, prepared in the ordinary manner, to a high temperature. This patent was likewise held bad. (*Rex v. Wheeler*, 2 B. & Ald. 345.)

A patent was obtained for an improved method of lighting cities, towns, and villages; but it appeared that the invention consisted in the improvement of an old street-lamp. The title was held too general in its terms, and the patent could not be supported. (*Cochrane v. Smethurst*, 1 Stark. 205.)

Another patent held bad, by reason of having too general a title, was that contested in the case of *Champion v. Benyon*, (1 Carp. Rep. 418). The patent was for

“a new and improved method of making canvas and sailcloth with hemp and flax, or either of them, without any starch whatever”; but the invention proved really to be a new method of preparing hemp and flax, with a view to its being woven into canvas and sailcloth.

The title of Felton's patent described the invention as a machine for giving an edge to knives, razors, scissors, and other cutting instruments; but the invention appeared, from the specification, not to be applicable to scissors, and the patent was adjudged to be void. (*Felton v. Greaves*, 3 C. & P. 611.)

In *Newall v. Elliott* (10 Jur. N. s. 955; S. C. 13 W. R. 11), *Pollock, C. B.*, stated he had, when Attorney General, refused an application for a patent for “An improvement in locomotion,” such a title being too general.

On the other hand, the titles in the following cases were held sufficiently certain:—“Improvements in the manufacture of plated articles,” when there was only a single improvement (*Nickels v. Haslam*, 8 Scott, N. R. 97). “A new or improved method of obtaining the reproduction of all the images received in the focus of the camera obscura,” leaving it a matter of doubt whether the method was altogether a new one, or only an improvement (*Beard v. Egerton*, 3 C. B. 97). A process for more distinctly showing the finer lines of an engraving by means of a glazed surface on the paper designed to receive the impression, was held sufficiently described by the words, “Certain improvements in copper and other plate-printing” (*Sturtz v. De La Rue*, 5 Russ. 322). Title, “Improvements in Carriages:” the specification described improvements in adapting

German shutters to carriages. But as such shutters can only be applied to covered carriages, and the title spoke generally of carriages, it was contended that it was too large. After argument, it was held a sufficiently accurate title; *Tindal, C. J.*, observing, that it would endanger the validity of very many patents which have hitherto been free from exception, if the mere fact that their titles were given in such terms as to be capable of comprising other inventions besides that contained in the specification were sufficient to avoid them, in the absence of any proof of intention to commit a fraud on the Crown, or to deceive or mislead the public. (*Cook v. Pearce*, 8 Q. B. 1044.)

The title of a patent was for "Certain Improvements in the Doors and Sashes of Carriages." The patentee, in his specification, said, "I have shown my invention as applied to railway carriage-doors and windows, although they are equally applicable to the doors and windows of any other description of carriage or in any position where doors and windows are subject to jar and vibration." This was held not to extend his claim beyond the title (*Oxley v. Holden*, 8 C. B. N. S. 707). See also *Newall v. Elliott*, (10 Jur. N. S. 954).

The title and specification must be read together; and if the former should be ambiguous, the latter may explain it. Thus the title of Neilson's patent was an invention "for the improved application of air to produce heat in furnaces where bellows or other blowing-apparatus are required." The invention disclosed by the specification was the introduction into the furnace of air heated between the blowing-apparatus and the furnace; and it was held that this answered sufficiently well to the title. (*Neilson v. Harford*, W. P. C.

1. 312, 373.) But a specification will not be allowed to comprise more than can be fairly found in the letters patent, and a claim in the specification of something not included in the grant renders the patent void. Thus, in *Croll v. Edge* (9 Scott, C. B. R. 479), the patent was granted for "certain improvements in the manufacture of gas, and in the apparatus used when transmitting and measuring gas." The specification contained a claim of an improved mode of making retorts; but as the claim fell neither under the head of manufacture of gas, nor apparatus used in transmitting or measuring gas, the patent was declared void.

Under sections seven and eight of the Patent Law Amendment Act, 1852, every petition for letters patent is referred to one of the law officers for approval; and it is the duty of the law officer to examine the title and the provisional specification (treated of in the next chapter), and to certify that they are correct and in proper form. It may be considered that, when a title has passed this ordeal, and a certificate of the law officer's approval of it has been given, no further question can arise upon its sufficiency. But from the results of the actual working of the law, we consider it highly desirable that an inventor should not place too great reliance upon this, but should adopt every means in his power to make both the title and the provisional specification perfectly correct, and in accordance with the spirit of the law, that they may, if at any time disputed, be held good upon their own merits.

CHAPTER VI.

THE SPECIFICATION.

THE sixth section of the Patent Law Amendment Act, 1852, enacts, that every petition for the grant of letters patent for an invention shall be left at the office of the Commissioners, accompanied by a statement in writing, called the provisional specification, signed by, or on behalf of, the applicant for letters patent, describing the nature of the invention. The rules issued under that Act require that the provisional specification shall state distinctly and intelligibly the whole nature of the invention, so that the law officer may be apprised of the improvement, and of the means by which it is to be carried into effect. But a general description of the invention fairly showing its real nature is sufficient. Minute details as to the manner of carrying out the invention need not be given. (*Re Newall and Elliott*, 4 C. B. N. s. 269; *S. C.* 4 Jur. N. s. 562.)

There is no need to illustrate the provisional specification with drawings though this is not unfrequently done.

By the ninth section of the statute it is enacted, that the applicant, instead of leaving with the petition a provisional specification, may, if he think fit, file with it an instrument in writing, under his hand and seal, to be called a complete specification, particularly describing and ascertaining the nature of the invention, and in what manner the same is to be performed. The object of the provisional specification is to provide

against the introduction into the complete specification of any matters of invention differing from those for which the letters patent were granted. The patentee is not to be prevented including in his complete specification those improvements in practical details which may occur in carrying out the invention, provided that those improvements require the use of the original matter of invention which is set forth in the provisional specification, for which the patent is granted.

The provisional specification is not intended to ascertain the *entirety* but the *identity* of the invention. (Per *Pollock, C. B.*, in *Newall v. Elliott*, 10 Jur. N. S. 955; *S. C.* 13 W. R. 11.) In this case the invention described in the claim cited *ante* (p. 13), was held to have been sufficiently disclosed by the provisional specification, although the latter made no mention of the third part of the invention as described and claimed in the complete specification. (See also *Foxwell v. Bostock*, 3 N. R. 546.)

It sometimes happens that after a provisional specification has been lodged, an inventor thinks it desirable to abandon it and lodge another in a different form. It has been doubted whether a patent obtained upon the latter provisional specification is valid, but in the case of *Oxley v. Holden* (8 C. B. N. S. 666), it was held that a provisional specification does not become public by the mere fact of abandonment. It does not become public until published by the Patent Office, under the authority of the 2nd sect. of the 16 and 17 Vict. cap. 115. Furthermore, though the first provisional specification may afford an objection at the office to the receiving of the second, or to the granting of a patent for the invention after the first specification

has expired, yet there is no principle of law and no enactment, making a patent void if so granted. A patent usually bears date the day the provisional specification is lodged, and the 24th section of the 15 & 16 Vict. c. 83 enacts that patents bearing date as of any day prior to the day of the actual sealing thereof, shall have the same validity as if they had been sealed the day they bear date.

It must be remarked that under the thirteenth section of the Patent Law Amendment Act, 1852, the law officer may object to the form of the complete specification, if left at the patent office along with the petition and declaration, and he may order the language to be altered before the patent is sealed. A complete specification filed after the sealing of the patent is not submitted to any examination of this kind.

If a provisional specification only shall have been left with the petition, the letters patent contain a clause making them void, in case the patentee shall not describe and ascertain the nature of the invention, and the manner in which the same is to be performed, by an instrument in writing under his hand and seal, and cause the same to be filed within six calendar months next after the date of the letters patent. But if a complete specification shall have been filed along with the petition, then in place of this clause another is substituted, making the letters patent void, in case such complete specification does not particularly describe and ascertain the nature of the invention, and in what manner the same is to be performed. It must be understood that in our subsequent remarks we refer only to the complete specification, or to the specification filed subsequent to the grant of the patent, and

not to the provisional specification, which need be no more than a mere sketch or outline of the perfect instrument.

The Crown has power, under the sixteenth section of the Patent Law Amendment Act, 1852, to direct any complete specification, which may have been filed previous to the sealing of a patent, to be cancelled, whereupon the protection obtained by the filing of such complete specification will cease.

The 22 Vict. c. 13, empowering the Secretary of State for War to purchase the benefit of patentees' inventions relating to munitions of war, contains provisions enabling the Secretary of State to prevent the publication of such inventions. (See the statute in the Appendix.)

It has generally been considered that letters patent are founded upon an implied compact between an inventor and the public.* The latter, through the Crown, secures to the former the monopoly of the invention, with all the advantages flowing therefrom, for a given period of time; and the inventor, on his part, undertakes to tell the community what his invention really is, and to teach them how it may be practised and

* The existence of this implied compact has however been recently denied by high judicial authority. In the great case of *Feather v. The Queen*, Pract. Mech. Jour. vol. 10. 2nd ser. p. 324, where the Court of Queen's Bench decided that Letters Patent granted no exclusive right as against the Crown, *Cockburn, C. J.*, in delivering the judgment of the Court said: "It appears to us that the assumption of a contract between the Crown and the patentee is fallacious. The grant of a patent is a simple exercise of the prerogative; in which, as the ground on which alone the grant of a monopoly is justifiable, that the invention shall be made available to the public, the Crown annexes a condition of the grant that the true nature of the invention and the manner in which it can be used shall be fully and unreservedly disclosed."

carried into effect when the monopoly shall have ceased. It is by this instrument that the public is made acquainted with the inventor's secret, and he is bound, in return for the privilege granted to him, to describe it clearly and fully, with the view of enabling others, when the proper time comes, to work the invention, if they desire to do so. In the meantime, the public are entitled to know what it is they are prohibited from using, that they may not unawares incur liability.

In describing his invention, a patentee may, if he think proper, make use of plans and diagrams to be annexed to the specification (*Ex parte Fox*, 1 V. & B. 67); and those who are called upon to interpret the instrument must look both at the words and the drawings, with the view of making them explain each other, and of arriving at the patentee's meaning. Many inventions can be explained perfectly well without any drawings; but wherever machines are the subject of, or connected with, the invention, drawings should always accompany the specification, for in such a case the visual representation of the parts will be clear at once, when a verbal description would be utterly unintelligible. Care must be taken that the patentee does not bind himself to the particular form given in the drawing, when he does not so intend. It may be that only a particular form is required to be secured, because no other form will effect the proposed result. In such a case, if the form is not copied, the invention is not made use of. But in most cases it is more than one form which is sought to be protected by patent, and the form given in the drawing is only to be taken as an illustration. This fact ought to be distinctly shown in the specification.

It seems that a patentee will not be allowed, in an action brought by him for an infringement, to read the provisional specification with a view to explain the complete specification. (*Mackelcan v. Rennie*, 13 C. B., n. s. 52.)

The construction of a specification belongs to the Court alone, as soon as the attendant circumstances and the true meaning of the technical phrases, if there be any, have been ascertained by the jury. (*Neilson v. Harford*, W. P. C. 1. 370; *Bovill v. Pimm*, 11 Exch. Rep. 718.) “Where novelty or infringement” (said *Lord Campbell*, in *Seed v. Higgins*, 8 H. L. C. 561) “depends merely on the construction of the specification, it is a pure question of law for the judge; but where the consideration arises how far one machine imitates or resembles another in that which is the alleged invention, it generally becomes a mixed question of law and fact which must be left to the jury.” It is also for the Court to decide the question as to the identity of inventions described in two nearly contemporaneous specifications, when such question can be determined by a simple comparison of the specifications. (Per *Coltman, J.*, in *Allan v. Rawson*, 1 C. B. 571; per *Pollock, C. B.*, in *Tetley v. Easton*, at *Nisi Prius*, Macr. P. C. 68; and per *Erle, J.*, in *Bush v. Fox*, Macr. P. C. 168; *Booth v. Kennard*, 2 Hurlst. & Norman, 84; *Thomas v. Foxwell*, 6 Jur. n. s. 271; *Hills v. London Gas Light Company*, 5 Hurlst. & Norm. 312. See, however, the observations of *Tindal, C. J.* in *Muntz v. Foster*, W. P. C. 2. 105.) But if anything more than simple comparison is required to determine the identity or dissimilarity of two inventions, the question must be submitted to the decision of the jury. “If there be

two specifications to be compared (said *Lord Westbury, C.*, in *Hills v. Evans*, 8 Jur. n. s. 528), in order to arrive at a conclusion of fact, the right of drawing the inference of fact from the comparison belongs to the jury, and is a question of fact, and not a question of law."

The most important case decided of late years with reference to the interpretation of specifications is that of *Betts v. Menzies*, in the House of Lords (10 H. L. C. 117; *S. C.*, Pract. Mech. Journ. vol 7. 2nd ser. p. 98), in which it was held that even where there is an identity of language in two specifications, if such identity consist merely in technical terms, it must be considered impossible for the judge to predicate what exact meaning the first patentee attributed to such terms, if any long interval of time, such as the interval from 1804 to 1848, elapsed between the two specifications. Under these circumstances the judge ought not to take upon himself to decide as to the identity of the inventions, guided only by the similarity of language. He cannot assume that the inventions are substantially the same because the expressions employed are similar. The identity or dissimilarity is a fact which the jury must be called on to decide from the evidence laid before them; and in a subsequent case on the same patent, *Wood, V.C.*, appears to have considered that it is no ground of proof of the effect of an anterior patent that scientific persons of the present day, with all the superior knowledge and intelligence obtained by the advance of science, can depose that they could produce the same results by the process disclosed by the anterior patent, as that designated by the subsequent one. (*Betts v. De Vitre*, 11 L. T. n. s. 445.)

Steiner obtained a patent, in 1843, for a new manu-

facture of a certain colouring-matter called garancine. This is extracted from madder-root, and is extensively used in dyeing. This colouring-matter was formerly extracted by simply boiling in water, and the refuse matter, termed "spent madder," was thrown aside as useless, although it was known still to contain a considerable quantity of colouring-matter which boiling would not extract. Various plans had been suggested for extracting the remainder of the garancine, previous to the date of Steiner's first patent, in 1832. His process was the employment of diluted sulphuric acid of a given strength, and he proposed to apply it to the extraction of the colouring-matter from both fresh and spent madder. So weak a solution of sulphuric acid had, however, little effect upon the spent madder; and in 1843 Steiner took out another patent, the one contested on this occasion. A much stronger solution of sulphuric acid was now used, and heat was employed. The process was specially applicable to the extraction of garancine from spent madder, and he thus obtained a large portion of the garancine which had previously remained attached to the woody fibre. *Pollock, C. B.*, at the trial of an action brought for an infringement of the latter patent (*Steiner v. Heald*, 2 Car. & Kir. 1033), thought that the process was substantially the same as that described in the specification under the first patent. "It appears to me that this is precisely the same as if you applied a process to grapes already imperfectly squeezed, by which you squeeze a little more juice out of them than was formerly done." Believing the invention to be destitute of novelty, he directed the jury that, in point of law, the alleged invention (viz. the one under the second

patent) was not any manner of manufacture for which letters patent could be lawfully granted. The jury gave their verdict in favour of the defendant, in conformity with the judge's direction; and a rule having been obtained by the plaintiff to set the verdict aside, and for a new trial, on the ground of misdirection, the Court of Exchequer made it absolute, and ordered a *venire de novo* to issue. The judge, it will have been observed, treated the conclusion to be drawn from the evidence as matter of law; whereas he ought to have left it to the jury to say, whether fresh and spent madder had different properties, chemical or otherwise, or whether they were the same thing, with the difference only that part of the colouring-matter had been already extracted. If the properties of the two substances were different, the invention was a new manufacture; but if the two things were the same, except that one was more-charged with colouring-matter than the other, in that case the invention claimed would simply have been the application of a process already known, producing a known result. The object to which the process was applied not being different from that to which it had been formerly applied, in which case there would have been no new invention, it was for the jury to say, upon the evidence, whether the invention was a new manufacture or not. (*Steiner v. Heald*, 6 Exch. Rep. 607.)

It is the duty of the judge, at the trial, where a specification comes into question, to explain to the jury what that instrument directs to be done, and it is for the jury to say, whether, upon the evidence, the promised result will be accomplished by pursuing those directions. (Per *Cresswell, J.*, in *Beard v. Egerton*.)

Formerly there was a disposition in the Courts to take part against patentees, under the impression that monopolies were not to be encouraged (attaching the old odious sense of the term to the phrase indicating a patent privilege for an invention); but of late years specifications have been liberally construed, with a disposition to read them fairly, so often as the patentee himself acts in a fair way towards the public, which he undertakes to instruct. (*Huddart v. Grimshaw*, W. P. C. 1. 85; *Elliot v. Aston*, W. P. C. 1. 222.) "A specification" (said *Pollock, C. B.*, in *Sellers v. Dickinson*, 5 Exch. Rep. 324) "is to be read with candour and indulgence." "It is to be construed" (said *Martin, B.*, in *Betts v. Menzies*, 1 Ell. and Ell. 1024) "with the view of supporting the patent, if it can fairly be done."

The first thing that a patentee about to specify must bear in mind is, that he is bound to act with *good faith*. He must not attempt to keep anything secret; he must make a full disclosure of his invention; and his whole specification must be fair, open, and honest. If he acts in any other manner, it will bear hardly with him when his specification comes to be examined in a court of justice.

The next point to be attended to is the accurate definition of the invention, so that the reader may clearly understand in what it consists, and how it may be distinguished from what is old or what is another man's invention. In the case of *Macfarlane v. Price* (1 Stark. 199), *Lord Ellenborough* said that 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, 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 art of man, unless he were previously acquainted with the construction of the instrument, to say what was new and what was old. 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." "Every party" (said *Cresswell, J.*, in *Gibson v. Brand*, W. P. C. 1. 640) "is bound to tell the public clearly by his specification what he claims, and what they may do or not do without risk of an action for infringing his patent." As to the necessity of distinguishing the new parts of a machine or apparatus described in the specification from the old parts, see *Holmes v. London & N. W. R. Co.* (Macr. P. C. 4); *Smith v. London & N. W. R. Co.* (2 E. & B. 69); *Tetley v. Easton* (Macr. P. C. 48); *Foxwell v. Bostock* (10 L. T. n. s. 144). It seems that when the invention is partly original and partly communicated from abroad, the latter part should be defined in the patent and specification. (*Renard v. Levinstein*, 10 L. T. n. s. 177.)

The patentee should take care not to claim more in his specification than he is strictly entitled to, since a failure in part (provided that part is a material part) is a failure altogether, and that which he has a just right to will fall along with that which does not belong to him. To use *Lord Eldon's* illustration—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, on account of its attempting to cover too much. In the specification under the patent

which formed the ground of dispute in *Hill v. Thompson* (W. P. C. 1. 239), the patentee claimed not only the use of a particular quantity of lime in smelting iron, but the discovery of the usefulness of lime in that process generally. It appeared, however, that lime had been previously used for the purpose, and the patent was accordingly held bad, although, if the patentee had restricted his claim to the particular proportions of lime and metal, it might have been sustained. Again, the specification under Minter's patent, for an improvement in the construction of chairs, was faulty for a similar reason; its claim was too extensive. The improvement consisted in applying a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acted as a counterbalance to the pressure against the back. It was proved that one Brown had previously invented a chair on the same principle, but his application of it was encumbered with additional machinery. If Minter had restricted his claim to the particular mode in which he effected the thing, his patent would have been valid; but since the specification went generally to the application of a self-adjusting leverage to the given purpose, it claimed more than he was entitled to; and if the patent had been held good, Brown could not have continued to make his chair without infringing it. (*Minter v. Mower*, W. P. C. 1. 138.) The older case of *The King v. Elsee* (W. P. C. 1. 76) affords another instance of the same error. The specification claimed in effect the exclusive right of combining silk and cotton thread, and then of making lace of the combined material. It was proved that silk and cotton thread had previously been combined in some mode or other; and although the ma-

terial so constructed was unfit for making lace on account of its coarseness, yet as the patentee did not confine himself to any particular mode of combining the two, his claim was held to extend to every mode, and was therefore bad. We may refer to the cases of *Saunders v. Aston* (3 B. & Ald. 886), *Rex v. Cutler* (1 Stark, 354), *Haworth v. Hardcastle* (W. P. C. 1. 484), and *Thomas v. Foxwell* (5 Jur. N. s. 37; 6 Jur. N. s. 271), as further illustrations of this point.

A patentee will not be allowed to make large, grasping, speculative claims to matters of which he was ignorant at the date of his patent. In the specification under a patent for improvements in machinery for raising water, the patentee said, "If any gases or elastic media other than atmospheric air are used, with which to charge the case [part of the machinery], I claim the sole right to do so." *Pollock, C. B.*, who tried an action brought for infringing this patent, remarked upon this passage, that he had no hesitation in saying that, in point of law, the patentee had no right to make such a claim, and he went on to state that the law would not permit a patentee to claim more than he has invented. "It will permit him to claim that which he has invented by means of successful experiments or otherwise, and which he has given to the public, but not that which is the mere subject of his speculation or imagination, or of his endeavouring to grasp more than he is entitled to. I think we are bound to give, as far as possible, the fullest effect to an invention; but, on the other hand, I think we are also bound to oppose the endeavours to make a patent grasp at and embrace a number of matters that were never in the head of the inventor."

In another part of the specification, the patentee described a wheel with straight arms, and then he said, "I propose to construct the wheel of every variety of configuration, so long as it is constructed with a channel in the interior." The defendant had made use of a wheel with *bent* arms, and the patentee treated this as an infringement, although he admitted that at the time he obtained his patent he had never thought of bent arms, and also that curved arms almost trebled the effect of the machine. The judge told the jury that the patentee's claim to every shape of arm would not stand. To hold that it was good, would be to reward a man who had rashly and ignorantly taken out a patent on a subject he had not appreciated. The same learned judge, when presiding at the trial of *Stevens v. Keating* (W. P. C. 2. 184),—an action for infringing a patent for processes for combining materials to form cements,—said, with reference to that part of the specification which was held to claim the use, not only of a particular acid, but of all acids which might succeed, that no patentee could be allowed to make such a claim, and to say, Whereas other substances will succeed, I claim them all. See also *Crossley v. Potter* (Macr. P. C. 246).

A perusal of these cases will show that it is safer for a patentee to restrict his claim to the use of those processes, or those materials, which he has found by actual trial to answer the purpose, than to extend it to matters of which he has no accurate knowledge; since, in doing this, he may either claim something which will not answer the object in view, something which is not new, or something which he does not sufficiently describe. The law will aid him, without any general claim

in his specification, in repressing infringements which are an illegal imitation of his process behind a colourable variation, or by means of mechanical or chemical equivalents.

“The safest course for patentees to adopt” (said *C. B. Pollock* to the jury on the trial of *Crossley v. Potter*, Macr. P. C. 256) “in framing their specifications is, instead of including everything, to confine themselves specifically to one good thing, and a jury will always take care that if that be a real invention, no man under colour of improvement shall be allowed to interfere with that which is the offspring of their genius.”

Since the specification is to be read along with, and is always considered as part of, the letters patent, the two must not be inconsistent. The invention referred to in the patent must be the invention described in the specification. Instances of the fatal effect of an inconsistency here have been already noticed in our last chapter.

It will be a fatal defect if the specification omit to mention anything which is essential to the carrying into effect of the invention. In a patent for trusses, the patentee omitted to state that the steel of which they were made was to be tempered with tallow, and *Lord Mansfield* held it void. (*Liardet v. Johnson*, W. P. C. 1. 53.) When a patent was granted to Dr. James for fever powders, he stated in his specification the materials of which they were composed, but omitted to describe the quantity of the ingredients. This being the case, said *Lord Mansfield*, he never durst bring an action for infringement, and it was certainly wise in him not to do so, as no patent could stand on such a specification. (W. P. C. 1. 54.) The speci-

fication of Neilson's patent omitted all mention of water-twires; if the apparatus (said *Parke, B.*) would not be beneficial without them, then it is of no use to the public as it is described in the specification, and the specification would be bad. (*Neilson v. Harford*, W. P. C. 1. 317.) When a patentee prepared the specification of his invention of spinning machinery, he said nothing as to the difference in the velocity of certain rollers. Having brought an action for an infringement, and gone into evidence to show what his invention was, *Buller, J.*, remarked, "The man comes to give an account of the invention, and says, I had calculated, and the difference of the velocity was to be as five to one. Now he 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." The patent was accordingly held bad. (*Rex v. Arkwright*, W. P. C. 1. 70.) Again, under a patent for improvements in steam-engines and paddle-wheels, a difference which had to be made in the lengths of certain rods was not given in the specification, and it was attempted to explain this by saying that the difference in the length, being small, would not be very material. "But the whole question" (said *Alderson, B.*) "is small, therefore it ought to have been specified; and if it could not be ascertained fully, it should have been so stated. . . . The 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 (referring to the case of *Liardet v. Johnson*) should be mentioned." (*Morgan v. Seaward*, W. P. C. 1. 182.)

A patent was obtained for improvements in floating docks. In an action for an infringement it was proved that the construction of floating docks was not new, but the plaintiff alleged that his invention consisted in the application of iron so as to form air-tight and water-tight chambers. Now there was no mention of iron in the specification, and it was held both by the judge on the trial and by the Court of Common Pleas that if this were so, the plaintiff had not complied with the conditions of the letters patent, which required him duly to describe the nature of the invention and in what manner it was to be carried out. (*Mackelcan v. Rennie*, 13 C. B. N. S. 52.)

But it would seem from *Crossley v. Beverley* (3 C. & P. 515), that in construing a specification, the state of the particular manufacture at the date of the patent must be kept in view. In this case, in describing a gas-apparatus, no directions were given as to a condenser; but since a workman capable of constructing a gas-apparatus knew that he would have to put it in, the specification was held sufficient. The patent in *Russell v. Cowley* (W. P. C. 1. 459) was for a method of manufacturing iron tubes without the use of a mandril. The specification gave no directions as to leaving out the mandril; but it was held that an intelligent workman would sufficiently understand, from the purport of the specification, that a mandril was not to be used. So, in *Beard v. Egerton* (8 C. B. R. 165), it was held that a competent operator would perceive, on perusing the whole specification, that it would be necessary to interpose an operation at a certain stage in the process of daguerreotyping.

A patentee is bound to describe the most advan-

tageous method within his knowledge for carrying his invention into effect; and he ought to put the public in possession of his secret in as ample and beneficial a way as he himself uses it. In *Wood v. Zimmer* (Holt, N. P. 57) a patent for a method of making verdigris was contested. It seemed that verdigris was made by the process set forth in the specification; but that the patentee was in the habit of secretly putting aquafortis into the boiler. The copper, forming one of the ingredients, was thereby more rapidly dissolved; but the verdigris produced was neither better nor cheaper than that made according to the specification. *Gibbs, C. J.*, considered this a prejudicial concealment, and a breach of the terms which the patentee made with the public.

Letters patent were obtained for a mode of making a medicine, composed of three salts, commonly sold in the shops under certain well-known names. The specification, instead of describing these salts by their names, described the processes by which they were produced, and then pointed out the proportions in which the salts were to be combined in order to form the medicine the subject of the patent. The methods of producing the separate salts were not essential to the combination, and formed no part of the invention. It was held at *Nisi Prius* that the specification was bad, *Abbott, C. J.*, saying that it is the duty of any one to whom a patent is granted to point out in his specification the plainest and most easy way of producing that for which he claims a monopoly; and to make the public acquainted with the mode which he himself adopts. If a person would be led to suppose a laborious process necessary to the production of any

one of the ingredients, when in fact he might go to a chemist's shop and buy the same thing as a separate simple part of the compound, the public are misled. (*Savory v. Price*, 1 Ry. and Moo. 1.)

If anything that gives an advantageous operation to the thing invented be concealed, the patent is void. In *Turner v. Winter* (W. P. C. 1. 81), *Buller, J.*, said, that if the patentee make the article for which the patent is granted of cheaper materials than those which he has enumerated, although the latter may answer the purpose equally well, the patent is void, because he does not put the public in possession of his invention, or enable them to derive the same benefit as he himself does. In *Sturtz v. De la Rue* (1 Carp. Rep. 463), it appeared that the patentee had mentioned in his specification a certain substance, under the name of the *finest and purest chemical white lead*, which was to be used in giving paper a glaze, preparatory to its receiving an impression from an engraved plate. He himself imported from Germany, for this purpose, a preparation called *Kremnitz white*; but he said nothing about this in his specification. It was shown that there was no article known in the chemists' shops in London which answered to the patentee's name, and that the purest white lead which could be purchased there did not answer the purpose. It was held, on these facts, that the patentee had not made that full disclosure which he ought to have made; and his patent was adjudged void. "A man has no right" (said *Pollock, C. B.*, in his address to the jury on the trial of *Tetley v. Easton*, Macr. P. C. 76) "to patent a principle, and then to give the public the humblest instrument that can be made from his principle, and reserve to himself

all the better part of it." (See also *Derosne v. Fairie*, W. P. C. 1. 158.) In *Walton v. Bateman* (W. P. C. 1. 622), *Cresswell, J.*, laid down this rule:—If a man knows a better mode than that which he states to the public, his patent will be vitiated.

If the patentee knows of any circumstance which conduces to the advantage of his manufacture or process, he is bound to mention it in his specification. In *Neilson v. Harford* (W. P. C. 1. 321), the judge told the jury, that if the patentee believed that certain internal partitions in the hot-blast apparatus were useful, the patent would be void, since he had omitted to say anything about them in the specification.

On the other hand, an inventor who obtains a patent for the useful application of a principle is not to be called on to set forth every mode of applying it. It is sufficient if he shows some of its useful applications, those applications being the best illustrations of the invention known to him. See what fell from *Lord Abinger* in *Neilson v. Harford* (W. P. C. 1. 356). But it must be borne in mind, that a patentee cannot, by making a general claim, cover improvements of which he was ignorant at the date of his specification (*Tetley v. Easton*, Macr. P. C. 77).

Nor is it obligatory on a patentee, when referring to materials and ingredients to be used in carrying his invention into effect, to enter into minute details as to such materials and ingredients, if they are known in the shops, and can be readily purchased under the names which he gives them (*Mackintosh v. Everington*, 2 Carp. Rep. 191). So also a person who takes out a patent for an invention consisting of the use of known materials in new proportions is not bound to limit his

claim to the precise proportions recommended by him in his specification (*The Patent Type Founding Company v. Richard*, Johns. 381). The names of articles mentioned in a specification must be taken to be used in their ordinary commercial sense. (*Sturtz v. De la Rue*, W. P. C. 1. 83; *Stevens v. Keating*, 2 W. P. C. 183, 187; *Muntz v. Foster*, 2 W. P. C. 104.) Whether or not a specification describes with sufficient accuracy the material out of which an article is to be made, is a question for the jury. (*Bickford v. Skewes*, W. P. C. 1. 214; *Derosne v. Fairie*, W. P. C. 1. 154; *Elliot v. Turner*, 2 C. B. 446; *Wallington v. Dale*, 7 Exch. 888.)

The patentee ought to state whether his invention consists of the useful application of a principle, or whether it lies in a particular form or arrangement or combination of parts. A number of old and well-known things, such as implements, machines, or parts of machines, may be combined so as to form a new and useful instrument or machine; and a patent obtained for such combination will be valid, care being taken that the specification does not claim the old parts as well as the novel combination. "If," said *Gibbs, C. J.*, to the jury, on trying the case of *Bovill v. Moore*, "a patentee has in his specification asserted to himself a larger extent of invention than belongs to him—if he states himself to have invented that which was well known before—then the specification will be bad." . . . "If a patentee has only invented an improvement, then his specification by which he claims the whole will be bad. If, on the other hand, he has invented an engine which consists of a perfectly new combination of parts, although all the parts were used before,

yet he will be entitled to support his patent for a new machine." . . . "If a combination of a certain number of these parts existed up to a given point before the date of his patent, and if the patentee's invention sprung from that point, and added other combinations to it, then his specification, stating the whole machine as his invention, is bad." (Dav. P. C. 404, 412, 413.)

It may be that all the parts of an invention, taken separately, are old, the patent being obtained only for a novel combination of them. In preparing his specification for such an invention, the patentee must be careful to separate what is old from what is new. He must limit his claim to the new combination, and to prevent misconstruction it is desirable, though not absolutely necessary, that he should distinctly disclaim the old parts. (*Lister v. Leather*, 3 Jur. N. s. 811 ; *S. C.* in error, 8 E. & B. 1004 ; *Seed v. Higgins*, 8 H. L. C. 550.) The case of *Kay v. Marshall* (2 W. P. C. 71) deserves attention with reference to this rule. The inventions claimed in the specification were two. First, certain new machinery for macerating flax ; and secondly, improved machinery for spinning flax. The first invention would very well have supported the patent separately considered. It was that part of the specification which described the second invention that broke down. The so-called improved machinery, considered in itself, and apart from its application, was shown to be wanting in novelty, and hence the patent fell to the ground. Had Kay, instead of claiming the invention of improved machinery, claimed only the invention of a combination of a known process of wetting flax, with the use of known machinery for spin-

ning the same, certain parts of such machinery being at a given distance from each other, the patent would, doubtless, have been held good. The combination was new, although the process and the machinery were old. The invention was one of great value, and if the specification had been rightly framed, the patentee might have had the benefit of it, without suffering the anxiety and expense of litigation in the common law courts, the Court of Chancery, and the House of Lords.

The case of *Tetley v. Easton* (Macr. P. C. 48) went three times before a jury, and on two of the occasions the plaintiff failed by inattention to this rule. His patent was for improvements in machinery for raising and impelling water. The specification described a great number of mechanical contrivances tending to effect the object in view, and concluded by claiming, as the patentee's invention, the several contrivances, "both when all used in combination, and when used severally." It was shown, on the trial of the first action for an infringement, that several of these contrivances were old; and with regard to one in particular, which the defendants were charged with infringing, that a person named Hales had previously procured a patent for something substantially the same. The jury thereupon found a verdict for the defendants upon issues which raised the question of the novelty of the plaintiff's invention. Subsequently to this trial, the plaintiff entered a disclaimer as to several parts of his specification, and brought another action against the same defendants. The jury again returned a verdict for the defendants. A rule to set aside the verdict, and for a new trial, having been obtained, the

legal questions came on for argument before the full court. It appeared that the amended specification described a centrifugal pump, composed of a hollow wheel, revolving within a case, furnished with pipes for conveying the water. This wheel was not stated to be old, nor was it disclaimed. The specification claimed generally the machinery for raising and impelling water. It also claimed the application of the inventions before mentioned, "both when all used in combination, and when used severally." It was held that the hollow revolving wheel was thereby claimed, and as this was an old invention, the specification was bad, for the patentee had described the wheel as part of his own apparatus, and if he had not intended to claim it, he ought to have disclaimed it. By a second disclaimer the patentee's claims were reduced to the single one of "the means of increasing the action of the machine by causing the liquid to enter the wheel at both sides;" and he then brought a third action for the infringement of his patent. Unfortunately it was shown that previous inventions had embraced a contrivance for the admission of the water on both sides of the wheel; and the learned judge (*Willes*) directed the jury to find for the defendant, for the reason that, although the wheel had been previously combined with apparatus which made the combination useless, yet that the contrivance in question had been made public property, and could not of itself be made the subject of a patent. The Court on the argument of a rule for a new trial on the ground of misdirection said, that the use of a wheel known before, in a manner known before, could not be deemed an invention capable of sustaining a patent, and held that the judge was right,

and the defendant consequently retained his verdict. (2 C. B. N. S. 706.)

The specification under a patent for an improved turning-table for railway purposes, after describing the machinery, claimed as new "the improved turning-table as hereinbefore described." This was held to be a claim of the parts, as well as of the combination forming the improved turning-table. For if parts are described, and the invention of them is not disclaimed, they will be considered as claimed. (*Tetley v. Easton*, Macr. P. C. 87). When a patentee is preparing his specification, it is of great importance that he should keep this proposition in mind. Now, it appeared, on the trial of an action for an infringement, that no part of the machinery was new, except certain suspending rods. It was held that the specification was defective, by reason of its not distinguishing what was old from what was new. "Every patentee," said *Jervis, C. J.*, "must, in his specification, describe the nature of his invention in such a way as that those who read it with common, ordinary understanding, and fairly read it, may see and understand what is new and what is old" (*Holmes v. London and N. W. Railway Co.*, Macr. P. C. 26).

In the case of *Foxwell v. Bostock* (3 N. R. 546; S. C. 10 L. T. N. S. 148) *Lord Westbury, C.*, laid down the rule to be that in a patent for an improved arrangement or new combination of machinery, the specification must describe the improvement and define the novelty, otherwise and in a more specific form than by the general description of the entire machine. "On both principle and authority it is most necessary that the specification should ascertain the improvement,

when the patent is for an improved, that is, a new combination. At the date of this patent many machines for sewing and stitching by a needle and shuttle were known and used. If in that state of things a patent is taken out for an improved arrangement or combination, the patentee is surely bound to show in what the improvement consists, and how it is to be effected. But this obligation is not discharged by a description of the entire machine which embodies, but does not distinguish the improvement, and thereby renders it undiscoverable, except upon a minute comparison and collation of all existing combinations with the new combination that is claimed. A specification so framed has the effect of concealing rather than of disclosing the invention." The plaintiff's counsel stated that the improvement consisted of an arrangement of three cams on one shaft, by the direct action of which the three principal movements in a needle and shuttle machine were effected. The plaintiff's evidence went to show that this arrangement formed the novelty and utility of the machine. "But this clear and simple statement is not to be found anywhere in the specification. It is true that the cams and shafts are described indiscriminately with the rest of the machine in the specification, but there is nothing to indicate that it is this addition which constitutes the improved arrangement or the new combination." The specification was therefore held to be defective and the patent invalid.

The specification under a patent for certain improvements in valves or plugs described three things as the improvements for which the patent had been obtained, without claiming the combination. Now, it appeared

that the three things separately considered were old, although the combination was new; and it was argued that the specification was bad. The Court said they thought there was much weight in the objection to the validity of the specification; but the question was not decided, because it did not arise upon the pleadings (*Bateman and Moore v. Gray*, Macr. P. C. 115).

A patentee sometimes obtains a second patent for improvements upon an invention which formed the subject-matter of a previous patent, and the second specification usually refers to the first. Care should be taken in preparing the second specification to make it distinguish clearly the later improvements from the earlier invention; for notwithstanding the case of *Harmer v. Playne* (11 East. 101), there is reason to suppose that unless it can be seen on reading the second instrument, after the expiration of the earlier patent, of what the later invention consists, as something distinguishable from an old part, the second patent would be pronounced invalid.

The fatal effect of ambiguous language in a specification is illustrated by the case of *Hastings v. Brown* (17 Jur. 648; S. C., 1 E. & B. 454). Charles Johnstone obtained the grant of a patent on the 21st December, 1844, for an invention of "certain improved arrangements for raising ships' anchors, and other purposes." The specification claimed as the invention "a cable holder to hold without slipping a chain cable of any size," but it could not be gathered from it whether the inventor claimed a cable holder to hold a chain cable of any *one* size, or to hold chain cables of different sizes. Now, a cable holder to hold a chain cable of any one size was already known at the date of the

patent. "The patentee," said *Lord Campbell*, when the case was argued before the Court of Q. B., on a motion to enter a nonsuit, "ought to state distinctly in his specification what is his invention, and to describe the limits within which he is to enjoy a monopoly. That is not done in this case with respect to the nature of the cable holder. What is claimed [in the pleadings] is a right to construct a capstan which will raise chain cables of different dimensions. Does the plaintiff disclose in his specification that he claims that invention? If it is only claimed with regard to one cable, then there is no infringement of the patent. The vice of the specification is, that it is quite equivocal what the claim is. There is nothing in the title which at all assists us; and when we look to the description in the specification, which speaks of 'a chain cable of any size,' I think that the proper construction to be put upon the words is that they mean 'one chain cable.' At all events, they are capable of that meaning; and if the specification is equivocal, it is bad." The rule for a nonsuit was accordingly made absolute.

The specification under a patent for certain methods of making cements, described a method of making cement from gypsum, in the course of which an alkali, neutralized by an acid, was directed to be used; sulphuric acid and potash being stated to be the best acid and alkali for the purpose. Another method for making cement from limestone and chalk was then described, and consisted also in the use of alkali, neutralized by an acid. An action was brought for an infringement of this patent. The infringement complained of was the use of borax in making cement,

borax being composed of an acid (boracic acid) and an alkali (soda). The patentee, however, failed, on account of his defective specification. If he confined himself to sulphuric acid and potash, then the defendant was not liable, seeing that he had used neither; if he claimed the use of all acids and alkalis, his claim was bad, because it was proved that there are some acids and alkalis which would not answer the purpose; and if he claimed only those acids and alkalis which were proper and suitable, he was bound to state what they were, otherwise experiments would have been necessary to discover what were suitable and what were not. (*Stevens v. Keating*, 2 W. P. C. 194.) See also *Muntz v. Foster* (2 W. P. C. 109).

Hills, in the specification under his patent for the purification of gas, claimed the use of "hydrated or precipitated oxides of iron." Now, if this meant all hydrated oxides of iron, the claim would have been too large, inasmuch as some of them would not effect the purpose, and the defendant, in an action for an infringement of the patent, argued that this was the meaning. The Court of Exchequer, however, although admitting that the language was not accurate, held, in their desire to uphold the specification, that the patentee meant to refer to such hydrated oxides as were precipitated (*Hills v. London Gas Light Co.*, 5 Hurlst. & Norm. 368).

If the specification contains language calculated to mislead as to an important part of the patented process, as where it contains positive misdirections as to the mode of operating, the patent will likewise be void.

On the trial of *Palmer v. Wagstaff* (Newton's Lond.

Jour. vol. 43, p. 131), in an action brought by a candle manufacturer for an infringement of a patent for improvements in the manufacture of candles, it was alleged that the specification contained a positive misdirection as to the position in which the wicks were to be placed in the process of manufacture. The object proposed was the production of a candle requiring no snuffing, by using two or more plaited wicks, arranged in such a manner that they would separate and bend outwards as the candle was burned. Now, it was shown that if the directions of the specification were followed, the candle would require lighting at the bottom, instead of the top. If lighted at the top, the wicks converged, instead of diverging, and produced a long snuff. The judge (*Pollock, C. B.*) told the jury that this was a serious mistake, and though the verdict was given against the plaintiff upon other points than those connected with the validity of the specification, there is reason to suppose that this instrument could not have been supported. See also *Savory v. Price* (1 Ry. and Moo. 1); *Bickford v. Skewes* (W. P. C. 1. 218); *Simpson v. Holliday* (13 W. R. 577).

It has also been decided, that if two methods of doing a thing are described in the specification, and by one of these it cannot be done, the specification is bad. (*The Queen v. Cutler*, Macr. P. C. 137.)

Medlock's specification of his invention for making red and purple dyes from aniline commenced the description of the process thus, "I mix aniline with dry arsenic acid and allow the mixture to stand for some time, or I accelerate the operation by heating it to or near its boiling point until it assumes a rich purple colour, and then I mix it with boiling water and allow

it to cool: when cold it is filtered and decanted." The Lord Chancellor (*Lord Westbury*) on the construction of the whole specification held that two processes, a hot and a cold process, were described, and as it was proved that only the hot process was effective, his lordship held the specification bad and the patent consequently invalid. It was urged that every person well informed on the subject could see that the cold process was ineffective, but "this," said his lordship, "would be to correct the specification by the superior intelligence of the reader." (*Simpson v. Holliday*, 13 W. R. 577.)

In *Booth v. Kennard* (2 H. & N. 84), an action brought for the infringement of a patent for improvements in the manufacture of gas, the specification was held bad, because it claimed generally the exclusive privilege of making oil directly from oleaginous seeds; and, instead of describing particularly how this was to be done, only stated that the mode of using the materials might be "the same as in the apparatus used in the ordinary mode of making gas from coal." The Court deemed such a description too vague and general, when coupled with a sweeping claim like that above mentioned. And the Court came the more readily to this conclusion, when it appeared that the principle or leading idea of the alleged invention was not new.

Then as to the general tenor of the specification, the language must be clear and precise; the explanation must be intelligible to a person of ordinary skill and ability, acquainted with the particular subject; and the directions such that, by pursuing them, he would produce without difficulty the result which the patentee describes. (*Tindal, C. J.*, in *Gibson v. Brand*,

W. P. C. 1. 631.) *Lyndhurst, L. C.*, said, in *Sturtz v. De La Rue* (W. P. C. 1. 83), that the specification must describe the invention in such a way, that a person of ordinary skill in the trade should be able to carry on the process. And *Lord Denman*, in *Bickford v. Skewes* (W. P. C. 1. 218), said that the specification is addressed, not to persons entirely ignorant of the subject-matter, but to artists of competent skill in that branch of manufactures to which it relates. The persons whom the specification ought to be designed for are persons of *ordinary* skill and ability; not those of special and unusual practice, knowledge, and capacity; not persons at the head of their profession. (*Morgan v. Seaward*, W. P. C. 1. 178; *Neilson v. Harford*, W. P. C. 1. 371; *Househill Co. v. Neilson*, W. P. C. 1. 692.)

But when placed in the hands of a person of ordinary skill and intelligence, the specification must be able to show him how the invention is to be carried into effect without further assistance, and without needing corrections or fresh invention on his part. There must be no necessity to try experiments in order to accomplish the end promised by the patentee. In *The King v. Arkwright* (W. P. C. 1. 66), *Buller, B.*, said that the specification must be such that mechanical men of common understanding (the validity of a patent for a machine being in dispute) must be able to make the machine by following its directions, without any new additions or inventions of their own. And *Parke, B.*, in *Neilson v. Harford* (W. P. C. 1. 371), said that to be valid, a specification should be such as, if fairly followed out by a competent workman, without addition or invention, would produce the machine for

which the patent is taken out. It had been previously laid down in *The King v. Wheeler* (2 B. & Ald. 349), that a specification which casts upon the public the expense and labour of experiments and trial is undoubtedly bad. It would, however, seem, that if any degree of benefit can be produced by complying with the directions of the specification, and without having recourse to experiments, that would be sufficient to save the patent; it is not necessary that the maximum degree of benefit should be produced (W. P. C. 1. 318). In an action for infringing a patent for an improved mode of paving streets with blocks, so shaped that each side of a block was bevelled both inwards and outwards, it was objected by the defendant that the specification gave no direction as to the angle at which the bevels were to be made. The judge who tried the case (*Lord Abinger*) told the jury, that if any angle would be of some use, the specification was good; but if some particular angle was essential, then, as the specification left that to be discovered by experiment, it was deficient and bad (*Macnamara v. Hulse*, W. P. C. 2. 129). But *Mr. Justice Bayley* said (in the case of *Crompton v. Ibbotson*, 1 Carp. Rep. 462), that a patentee, knowing that given materials will not answer the purpose, is bound so to word his specification as to prevent others from trying experiments on that which he knows will not answer. In this case a patent for an improved method of dyeing and finishing paper came into question; the specification described the paper as being conducted to a heated cylinder by means of cloth, "which cloth may be made of any suitable material, but I prefer it to be made of linen warp and woollen weft." Now the patentee had

ascertained from repeated trials that no other substance would answer the purpose. It was held that the public had not the full benefit of the inventor's discovery, and persons misled by the specification might be induced to make experiments which the patentee knew would fail. This, however, must be considered an extreme case.

In connection with this subject the following observations of *Lord Westbury, C.*, are worthy of attention, "When it is stated that an error in a specification which any workman of ordinary skill and experience would perceive and correct will not vitiate a patent, it must be understood of errors which appear on the face of the specification or the drawings it refers to, or which would be at once discovered and corrected in following out the instructions given for any process or manufacture, and the reason is, because such errors cannot possibly mislead. But the proposition is not a correct statement of the law if applied to errors which are discoverable only by experiment and further inquiry. Neither is the proposition true of an erroneous statement in a specification amounting to a false suggestion, even though the error would be at once observed by a workman possessed of ordinary knowledge of the subject. For example, if a specification describes several processes or several combinations of machinery, and affirms that such will produce a certain result which is the object of the patent, and some one of the processes or combinations is wholly ineffectual and useless, the patent will be bad although the mistake committed by the patentee may be such as would at once be observed by an ordinary workman." (*Simpson v. Holliday*, 13 W. R. 577.)

It may be inferred from the case of *Huddart v. Grimshaw* (W. P. C. 1. 85), that the assertion in the specification of something being important, when in point of fact it is not, will vitiate the patent, because there is evidence of an attempt to deceive. In *Turner v. Winter* (W. P. C. 1. 80), *Ashurst, J.*, said that if there is any unnecessary ambiguity affectingly introduced into the specification, or anything which tends to mislead the public, the patent is void. And it was laid down in *Galloway v. Bleaden* (W. P. C. 1. 524), that if there is a want of clearness in the specification, so that the public cannot afterwards avail themselves of the invention, much more if there is any studied ambiguity in it, so as to conceal the invention from the public, no doubt the patent would be completely void. Again, if anything is said to be immaterial which is in reality material, this will be a fatal defect. Thus in *Nelson v. Harford* (W. P. C. 1. 313), *Parke, B.*, said, "The patentee states that the size and form of the vessel in which the air is heated, previous to its being driven into the furnace, are immaterial. Now, my strong opinion is that the clause is an incorrect statement and that, being untrue, vitiates the specification, and prevents the patent from being a good patent." See also *Simpson v. Holliday* (13 W. R. 577).

Simple mistakes, being merely words used in an inaccurate sense, which words are often used, and are explained by the context, or by the drawings annexed, will not avoid the patent. Thus, in *Bloxam v. Elsee* (1 Carp. Rep. 439), the specification made use of the expressions, *vis de pression*, *vis de répulsion*, and *vis de réaction*, for different screws; but the context and the

drawings showed what was meant, and the objection taken on this ground was not sustained. In another specification the word "discolour" was used, with the meaning "discharge the colour." This, though a mistake in translating the French word "décolorer," was held not important enough to vitiate the instrument. A court of law will not insist upon accuracy in minute and unimportant matters; it will not insist upon strict logical correctness; it will overlook such evident errors as the mention of "imponderable substances." (*Pollock, C. B., in Tetley v. Easton, at Nisi Prius, Newton's Lond. Jour. vol. 42. p. 58.*) All it requires is, that the patentee shall make his meaning clear, and that his language shall be intelligible to the persons to whom it is addressed.

It may here be remarked, that where there is doubt as to the meaning of particular expressions, and there is some question for the jury, competent persons may be called for the purpose of explaining the matter; but evidence is not admissible to explain or alter the plain and precise words of a specification, or to correct mistakes in it. (*Neilson v. Harford, W. P. C. 1. 313.*) In *Elliot v. Turner* (2 C. B. 446), it was held that the words of a specification are to be construed according to their ordinary and proper meaning, unless there be something in the context (which may be explained by evidence) to show that a different construction ought to prevail. Of course it is allowable to call persons of skill in the department of practical art to which the invention belongs, for the purpose of saying whether or not they understand the specification, and whether or not they could execute its directions, so as to produce a useful result. The persons composing

juries are drawn indiscriminately from the general public, and it cannot be expected that they should of their own knowledge be competent to say whether the specification is one that fulfils its chief object,—that of instructing artists or workmen of ordinary competency to execute the invention. Hence it is obvious that in forming their opinion they ought to have the assistance of persons answering this description. See *C. J. Tindal's* remarks in *Walton v. Potter* (W. P. C. 1. 595).

It sometimes happens that, between the grant of letters patent and the filing of the specification, the patentee discovers that his original invention is capable of material improvement. The intervening period is allowed the patentee for the very purpose of perfecting his invention; and therefore, if he fails to communicate to the public the best information he possesses at the time of filing the specification, it will be void. In *Crossley v. Beverley* (W. P. C. 1. 117), it was objected that the patentee had added something to the invention between these two periods; but, said *Bayley, J.*, “I think that if between taking out the patent and filing the specification the inventor 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 he has obtained before the specification.” It must, however, be understood that the additions must strictly relate to the invention as it stood at the time of the grant of the patent. It is not competent for a patentee to introduce new heads into the specification,

or in any way to extend the subject-matter of the invention. (*Crossley v. Potter*, Macr. P. C. 240.) And assignees of a patent should know that the specification itself is not conclusive evidence of the invention; for the inventor may be called to state in court what his invention really was, and he may show that it was something different from that specified. (*Bateman v. Gray*, Macr. P. C. 111; *Crossley v. Potter*, Macr. P. C. 255.)

It is usual for a patentee to insert at the close of his specification certain clauses, which are known as "claims." The insertion of these claims is not insisted on by the law, but they offer an opportunity for the patentee to sum up his invention, and to set forth in a brief form what he considers the pith and essence of it. When the claims refer to the invention in very short terms, and introduce the words, "as hereinbefore described," this will render an examination of the previous description necessary, in order to ascertain what the invention really is. In drawing the claims in a specification which refers to a machine or apparatus, consisting of many old and new parts, it is desirable to introduce a general claim to the entire machine as a combination, and then separate claims to the new parts. An observance of this rule will be attended with useful results, in case there should arise any necessity to disclaim part of the invention. *Cottenham, L. C.*, said in *Kay v. Marshall* (W. P. C. 2. 39), "The claim is not intended to aid the description, but to ascertain the extent of what is claimed as new. It is not to be looked to as the means of making a machine according to the patentee's improvements. If, therefore, the specification containing the descrip-

tion be sufficiently precise, it cannot be of any consequence that expressions are used in the claim which would be too general if they proposed to be part of the description." See also *Lister v. Leather* (3 Jur. n.s. 811 ; *S. C.* in error, 8 E. & B. 1004).

On the other hand, where the description in a specification was in the first instance too general, but the inventor afterwards in describing his invention referred to certain figures in drawings annexed to the specification, and the claim was for the invention *described with reference to those figures* the specification was held sufficient. (*Daw v. Eley*, 14 W. R. 126.) See also *Russell v. Cowley* (W. P. C. 1. 465).

The following decisions have reference to the interpretation of "claims:"—*Palmer v. Wagstaff* (9 Exch. 494) ; *Macalpine v. Mangnall* (3 C. B. 496) ; *Templeton v. Macfarlane* (1 H. L. C. 595) ; *Sellers v. Dickinson* (5 Exch. 312) ; *Seed v. Higgins* (8 H. L. C. 550) ; *Thomas v. Foxwell* (6 Jur. n.s. 271).

The address of *Mr. Baron Alderson* to the jury, on the trial of the case of *Morgan v. Seaward* (W. P. C. 1. 170), touches on so many of the preceding points, and is so full of instruction, that we shall place a large part of it before the reader.

"Has Mr. Galloway (the patentee) sufficiently described the steam engine so as to enable any one to know what he has invented, and so as to enable a workman of competent skill to carry the invention into effect? *Mr. Justice Buller*, in the case of *The King v. Arkwright*, lays down as the criterion, that a man, to entitle himself to the benefit of a patent of monopoly, must disclose his secret and specify his invention

in such a way, that others of the same trade, who are artists, may be taught to do the same thing for which the patent is granted, by following the directions of the specification, without any new invention or addition of their own. That is reasonable and proper; for people in trade ought to be told the manner in which the thing may be done in respect of which the patent is granted. How? Not by themselves becoming inventors of a method of carrying it into effect, but by following the specification, without making a new invention or making any addition to the specification. If the invention can only be carried into effect by persons setting themselves a problem to solve, then they who solve the problem become the inventors of the method of solving it; and he who leaves persons to carry out his invention by means of that application of their understanding, does not teach them in his specification that which, in order to entitle him to maintain his patent, he should teach them—the way of doing the thing;—but sets them a problem which, being suggested to persons of skill, they may be able to solve. That is not the way in which a specification ought to be framed. It ought to be framed so as not to call on a person to have recourse to more than those ordinary means of knowledge—not invention—which a workman of competent skill in his art and trade may be presumed to have. You may call upon him to exercise all the actual existing knowledge common to the trade, but you cannot call upon him to exercise anything 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 should apply them without prejudice either one way or the other;.

for both parties 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 that the specification shall be fair, honest, open, and sufficient; and, on the other hand, the patentee should not be tripped up by captious objections which do not go to the merits of the specification. Now, applying those criteria to the evidence in the cause, if you shall think that this invention has been so specified that any competent engineer, having the ordinary knowledge which competent engineers possess, could carry it into effect by the application of his skill, and the use of his previous knowledge, without any inventions on his part, and that he could do it in the manner described in the specification, and from the information disclosed in the specification, then the specification would be sufficient. If, on the other hand, you think that engineers of ordinary and competent skill would have to set themselves a problem to solve, and would have to solve that problem before they could do it, then the specification would be bad.

“ Further, if a patentee is acquainted with any particular mode by which his invention may be most conveniently carried into effect, he ought to state it in his specification. . . . The specification 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 the case of *The King v. Wheeler*, said that a specification that casts upon the public the expense and labour of experiments and trials is undoubtedly bad. Here, in

this case, the defendants take that line of argument: they say that experiments and trials are necessary. If it be said that all these matters will be well or easily known to a person of competent skill (and to such only the patentee may be allowed to address himself), then the invention will not in reality have given any useful or valuable information to the public.

“Now let us apply the principle of that case to the present, and see whether or not the patentee here has given that full information by the specification and drawing which, being addressed to persons of competent skill and knowledge, would enable them, from that specification and drawing, to carry the invention into effect. On that subject there is, undoubtedly, contradictory evidence; but you see a specification is addressed to all the world, and therefore all the world—at least those possessed of a competent skill—ought to be able to construct the machine by following that specification. It is not fair to you or to me, if we be less inventive than our neighbours, that we should be prevented from constructing these machines by reason of the specification not giving a clear exposition of the way in which it is to be done. In the case of the steam-engine, there was put in on the part of the defendants a model, made, it was said, according to the specification, which model would not work. The model was a copy of the drawing, and would not work because one part happened to be a little too small, whereas if it had been a little larger it would have worked. Now, a workman of ordinary skill, when told to put two things together so that they should move, would, of course, by the ordinary skill and knowledge he possesses, make them of sufficient size to move.

Then he would have to bring to his assistance his knowledge that the size of the parts is material to the working of the machine. That is within the ordinary knowledge of every workman. He says—‘I see this will not work because it is too small;’ and then he makes it a little larger, and finds it will work. What is required is, that the specification should be such as to enable a workman of ordinary skill to make the machine. With respect to that, therefore, I do not apprehend you will feel much difficulty, but with respect to the other there is a good deal more difficulty.”

The second invention to which the learned judge proceeded to refer consisted, so far as it is now necessary to notice, in an improvement on paddle-wheels for propelling vessels, whereby, it was said, the float-boards or paddles would enter and come out of the water at positions the best adapted for giving full effect to the power applied. Connecting-rods were attached at one of their ends to the bent stems of the float-boards, and at the other to the disc. “The only observation” (continued the judge) “is, that he gives no dimensions. He fixes no points either for the centre of the eccentric or for the crank to which the eccentric centre is attached. Therefore, if those can only be ascertained by experiments subsequently to be made, then the specification is bad. The whole, in some degree, turns upon the length of the rods and the position of the centre of the eccentric. . . . Now, you cannot treat the actual picture which is given in the drawing as any guide to the particular angle or to the particular position of the eccentric; and for this simple reason—if that were the criterion, then the substance of the invention would be the particular angle

contained in the particular drawing: and in order to show an infringement, they ought to have shown that Mr. Seaward's wheel entered the water at the same angle as the angle described by the drawing; and, therefore, in that case, you would be bound to find the first issue for the defendant, viz. that there was an infringement. If, however, you treat the drawing as only an illustration of the invention, and not as confining the invention to the particular angle there described, then you ought to find in the specification some directions which should enable you to construct the machine in a new form; or you ought to be satisfied that without any instructions a workman of ordinary and competent skill and knowledge would be able to do it. 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 machinery, could invent anything of the 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. The evidence of Mr. Park is much more material. He says, 'I could, without any difficulty, make the machine so that the paddles could enter the water at any angle.' He prepared the models which have been used. Now the criterion is, whether at the time the specification was introduced into the world Mr. Park would have been able to construct the machine with his ordinary skill and knowledge, without the peculiar knowledge he has since obtained upon the subject, from being

employed to make the models for Mr. Morgan; because it would not be at all fair to allow your verdict to be influenced by knowledge so acquired. But he says, with his ordinary knowledge and skill he could, without difficulty, construct a wheel so that the paddles should enter the water at any angle. He says, if the diameter of the wheel is given, which it is fair should be given, and the immersion of the float, and that is also fair to be given, he could do it. Those are reasonable data for him to require; and if with his ordinary skill and knowledge, and without that peculiar knowledge which he has obtained in consequence of his connection with the plaintiff and with his 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.

“The specification ought to contain a full description of the way in which it is to be done. The question really is, whether, upon the whole evidence, you are of opinion that the specification does fairly and fully and properly give to the public that information which the public are entitled to receive, that is to say, whether it tells them, without having recourse to experiments, how to do it, or whether it even tells them what is the course their experiments ought to take—to what point their examinations and experiments should be directed. He says he could do it with the skill he possesses; and he has described the manner in which he proposes to do it. He says, ‘I have seen this drawing.’ Then he produces a drawing, and he

says, 'This represents my plan of drawing it. An engineer of competent skill would have no difficulty in doing it.' His doing it himself I do not consider so material; but he says any engineer of competent skill would have no difficulty in doing it. That is material.

"Then when that drawing was shown, some of the gentlemen appearing on behalf of the defendants drew an angle upon it as the angle of entering, and asked him how that could be done. No doubt his principle would enable him to work out any angle; but there is a set of angles which would cause the centre of the eccentric to go beyond the wheel itself, which, therefore, it is impossible to carry into effect; but those angles are such as would not be required in ordinary practice by any persons. You should discard on both sides all exaggerated cases, and look to the substance of the thing. If you think in substance that the information really communicated would be enough in all ordinary cases, or in such cases as are likely to occur, then that would do; but if it is not a clear statement, and if it does not give such information as will render it unnecessary for parties to make experiments, then the specification would, in that respect, be insufficient. It is most important that patentees should be taught that they are bound to set out fully and fairly what their invention is; for, suppose a person were to make an invention, and get a right of making it for fourteen years, to the exclusion of all other persons, it would be a very great hardship upon the public if he were allowed to state his specification in such a way that, at the expiration of the term of his patent, he might laugh at the public, and say, 'I have

had the benefit of my patent for fourteen years, but you, the public, shall not now carry my invention into effect, for I have not shown you how it is to be done; I have got my secret, and I will keep it.' . . . Mr. Morgan, in practice, makes his rods of different lengths; and he must necessarily do that in order that the floats may follow at the same angle as the driving float enters the water. If so, he should have said in his specification, 'I make my rods of different lengths, in order that the rest of my floats may enter at the same angle; and the way to do that is so and so.' Or he might have said, 'It may be determined so and so.' But the specification is totally silent on the subject. Therefore, a person reading the specification would never dream that the other floats must be governed by rods of unequalled length; the least of all could he ascertain what their lengths should be until he had made experiments. Therefore it is contended that the specification does not state, as it should have stated, the proper manner of doing it. He says, 'If they are made of equal lengths, though the governing rod would be vertical at the time of entering, and three would be so when they arrived at the same spot, yet the fourth would not come vertical at the proper point, nor would the fifth, sixth, or seventh.' 'Then they would not accomplish that advantage which professes to be acquired. The patentee ought to state in his specification the precise way of doing it. If it cannot be completely done by following the specification, then a person will not infringe the patent by doing it. If this were an infringement, it would be an infringement to do that perfectly which, according to the specification, requires something else to be done to make it perfect.

If that be correct, you would prevent a man from having a perfect engine. He says, 'Practically speaking, the difference in the length of the rods would not be very material, the difference being small.' But the whole question is small, therefore it ought to have been specified; and if it could not be ascertained, it should have been so stated. Now, this is the part to which I was referring when I cited the case before *Lord Mansfield*, on the subject of the introduction of tallow, to enable the machine to work more smoothly. There it was held that the use of the tallow ought to have been stated in the specification. This small adjustment of these different lengths may have been made for the purpose of making the machine work more smoothly; if so, it is just as much necessary that it should have been so stated in the specification, as it was that tallow should have been 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. . . .

“The question on 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.”

CHAPTER VII.

THE LETTERS PATENT: THEIR DURATION AND EXTENT.

THE form in which letters patent are usually issued is given in the Appendix to this volume. On reference thereto, it will be seen that the Crown, with a superabundance of words and formality, grants unto A.B., his executors, administrators, and assigns, especial licence, full power, sole privilege and authority, that he, the said A.B., his executors, &c., from time to time, and at all times thereafter during the term of years thereafter expressed (viz. fourteen years), shall and lawfully may make, use, exercise, and vend his invention within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, in such manner as to the said A.B., his executors, &c., shall in his or their discretion seem meet; and that the said A.B., his executors, &c., shall have and enjoy the whole profit, benefit, commodity, and advantage from time to time coming, growing, accruing, and arising by reason of the said invention, for and during the term of years therein mentioned. Then "all and every person and persons, bodies politic and corporate, and all other our subjects whatsoever, of what estate, quality, degree, name, or condition soever they be," are strictly commanded not to infringe the patent. It is, however, provided that, if it shall be made to appear to the

Crown or the Privy Council that the grant is contrary to law, or prejudicial or inconvenient to the subjects of the realm in general, or that the invention is not a new invention as to the public use and exercise thereof within the United Kingdom, etc., or that the said A. B. is not the first and true inventor thereof within the realm, the patent shall be void.

There are also other provisoes, the two most important of which are—firstly, that declaring the grant to be void if the said A. B., his executors or administrators, shall not particularly describe and ascertain the nature of the invention, and in what manner the same is to be performed, by an instrument in writing (to wit, the specification), under his or their hands and seals, and cause the same to be filed in the Great Seal Patent Office within six calendar months next after the date of the letters patent*; and, secondly, that which declares the patent to become void at the expiration of three years or seven years, in case the stamp duty of £50 is not paid to the Commissioners of Patents before the expiration of the third year, and the stamp duty of £100 before the expiration of the seventh year.

The questions arising as to the novelty of the invention, and as to whether the patentee is the first and true inventor, have been considered in previous chapters, and those relating to the sufficiency of the specification have also been considered.

It has been recently decided by the Court of Queen's Bench in the important case of *Feather v. The Queen*

* This proviso is modified to meet the case of a complete specification being filed, instead of a provisional specification, along with the petition and declaration. See the Form in the Appendix.

(Pract. Mech. Jour., vol. 9. 2nd Ser. 321), that letters patent in the form above mentioned are not valid as against the Crown, and that the Crown is entitled, notwithstanding the grant, to use the invention without the assent of the patentee.

The law officer has power, under the fifteenth section of the Patent Law Amendment Act, 1852, to direct all such restrictions, conditions, and provisoes, as he may deem usual and expedient or necessary, in pursuance of the provisions of the Act, to be inserted in the letters patent. Moreover, under the sixteenth section of the same Act, the Crown has power, by warrant under the sign-manual, to direct the law officer to withhold his warrant, or to direct that any letters patent for the issuing whereof he may have issued a warrant shall not issue, or to direct the insertion in any letters patent of any restrictions, conditions, or provisoes which the Crown may think fit, in addition to or in substitution for any restrictions, conditions, or provisoes which would otherwise be inserted therein under the Act. Of course, these powers will only be exercised on very special occasions.

By the 22nd Vict. c. 13, the Secretary of State for War is empowered to acquire by purchase or gift, the benefit of any inventions of improvements in munitions of war, and of any letters patent obtained for the same, and to prevent the disclosure of such inventions. (See the statute at length in the Appendix.)

It is imperative that the patent should be issued during the continuance of the provisional protection, or the protection by reason of a deposit of a complete specification. The only exceptions allowed are—firstly, where the application to seal was made in due

time, and the sealing was delayed by reason of the delivery of notice of objection, or an application to the Lord Chancellor in relation to the sealing of the patent (15 & 16 Vict. c. 83, s. 20); secondly, where the delay in sealing has arisen from accident, and not from the wilful neglect or default of the applicant (16 & 17 Vict. c. 115, s. 6). The Chancellor, in either case, may extend the time for sealing, but not for longer than a month. The practice upon applications to extend the time is governed by the Chancellor's rule of the 17th July, 1854—for which see the Appendix.

In the case of the applicant dying during the continuance of protection, whether under a provisional or complete specification, the patent may be issued to the executors or administrators during the continuance of such provisional or other protection, or at any time within three months after the death of the applicant (15 & 16 Vict. c. 83, s. 21). In this case a petition is presented to the Lord Chancellor, setting forth the facts, and requesting his order that the letters patent may issue to the executors or administrators. The petition must be supported by an affidavit verifying its allegations, and the probate or letters of administration must be produced.

Letters patent are usually dated as of the day of the application for the same; but the Lord Chancellor, or the law officer, has power to cause them to bear date as of the day of the sealing, or of any other day between the day of the application or provisional registration, and the day of the sealing (15 & 16 Vict. c. 83, s. 23). The term for which patents may be granted is limited, by the statute of James, to fourteen years, and it is usual to make the grant for

the whole of this term. The time runs from the day of the date of the patent, including that day; for instance, a patent for fourteen years, dated 26th February, 1825, was held to expire at twelve o'clock on the night of the 25th February, 1839 (*Russell v. Ledson*, 14 M. & W. 574). In case clerical errors should have been made in letters patent, the Court of Chancery has power to correct them. (*Re Nickels' Patent*, 4 Bea. 563.)

The Patent Law Amendment Act, 1852, introduced new regulations as to the payment of fees and stamp-duties in respect of letters patent; and instead of retaining the old plan of making the whole expenses payable at the time of taking out the patent, the burden of them is now postponed to the eve of the expiration of the third and the seventh year after the date of the patent. This is a convenient arrangement for patentees, who, in place of paying a heavy sum for what may turn out an unremunerating invention, have now an opportunity of practically testing its commercial value before the heaviest part of the expense is incurred. In order to insure payment of the postponed sums, the statute 16 Vict. c. 5, s. 2, enacts that all letters patent shall be made subject to the condition that the same shall be void at the expiration of three years and seven years, respectively, from the date thereof, unless there be paid, before the expiration of the said periods, the stamp-duties mentioned in the schedule of the Act; and we have seen accordingly that such a clause is inserted in letters patent.

It is a sufficient compliance with the statute if the duty is paid on the third anniversary of the date. Thus, where letters patent were dated on the 26th February, 1855, and the three years' stamp-duty was paid on the

26th of February, 1858, it was held to have been paid in due time. (*Williams v. Nash*, 28 Beav. 93.)

With regard to letters patent, obtained in the United Kingdom, for foreign inventions patented abroad, the 25th section of the Act of 1852 declares that they shall expire (whatever may be the term limited in such letters patent) at the expiration of the term during which the patent obtained abroad shall continue in force, or in case of several foreign patents at the expiration of the first.

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It was formerly the practice to issue separate letters patent for the three kingdoms, upon three separate applications of the inventor; but now, by the Act of 1852, it is provided that letters patent shall extend to the whole of Great Britain and Ireland, the Channel Islands, and the Isle of Man; and, in case the Queen's warrant shall so direct, such letters patent shall be made applicable to our colonies, or such of them as shall be mentioned in the warrant. The letters patent thus granted are declared to be as valid and effectual throughout all the territories just mentioned, as the letters patent formerly granted were separately valid in the three kingdoms respectively.

The Commissioners of Patents have, for some time past, refused to extend the grants to the colonies; and our colonies are now gradually acquiring patent laws of their own.

In case of the destruction or loss of letters patent, others of the like tenor and effect, and sealed and dated the same day, may be issued under the authority of the warrant, in pursuance of which the original letters patent were issued (15 & 16 Vict. c. 83, s. 22). The practice is to present a petition to the Lord

Chancellor, setting forth the facts, accompanied by an affidavit in support. The duplicate letters patent are impressed with a stamp of £5.

As to the mode of applying for a prolongation of letters patent, and the principles which guide the Privy Council in deciding upon the application, we must refer the reader to a subsequent chapter.

CHAPTER VIII.

DISCLAIMERS.

It has been already shown that a patent which includes two inventions, of which one is not new or not useful, is altogether invalid; and that if the patent is confined to a single invention, any material part of which has either of these defects, the patent is likewise invalid. The fatal effect of an inconsistency between the title and the specification has also been pointed out. To remedy a law which in very many cases bore unjustly upon patentees, a clause was introduced into the Act 5 & 6 Wm. IV. c. 83, by which a patentee is empowered (by leave of the Attorney or Solicitor General, in case of an English patent; or of the Lord Advocate or the Solicitor-General for Scotland, in case of a Scotch patent; or of the Attorney or Solicitor General for Ireland, in case of an Irish patent, certified by his fiat and signature), to enter a disclaimer of either the title of the invention or of the specification, stating the reason for such disclaimer; or with the like leave to enter a memorandum of any alteration in the title or specification (not being such disclaimer or alteration as shall extend the exclusive right granted by the said letters patent); and such disclaimer or memorandum being filed with the specification, is then to be deemed part of the letters patent, or of the specification, in all

courts. It is, however, expressly provided that the disclaimer, or memorandum of alteration, shall not be receivable in evidence in any action or suit pending at the time it was filed, except in a proceeding by *scire facias*.

The effect of this clause has been to check the bringing of the action of *scire facias* to repeal patents, except where the vice complained of goes to the essence of the invention, and to every part of it. The patentee being enabled not only to amend the title and specification by disclaimer, but to put his disclaimer in evidence at the trial, it may be that the prosecutor's case will be altogether cut away from him. In such event he may be called upon to pay the patentee's costs, the payment of such costs being the condition of the bond given by him at the commencement of the suit, in case the patent shall not be cancelled by means of the writ of *scire facias*, or proceedings thereunder. Leave to put the bond in suit must, however, be first obtained from the Master of the Rolls or the Attorney-General; and neither functionary is likely to grant such leave, when the prosecutor stayed his proceedings as soon as he received notice of the disclaimer by which the invalidity of a patent was cured. See what fell from the judges in *The Queen v. Mill* (10 C. B. 379.)

It might have been considered as authoritatively decided, prior to the passing of the Patent Law Amendment Act, 1852—1st, That a disclaimer could be given in evidence in an action brought for an infringement committed previous to the filing of the disclaimer; that is to say, at a time when the patent was invalid, when the action was commenced after the filing. And, 2nd, that a disclaimer might be given in evidence in a pro-

ceeding by *scire facias*, whether it was filed before or after the issue of the writ. However, as two courts of equivalent authority had given adverse decisions upon one of these questions, the legislature thought proper to interpose. By the 39th section of the Patent Law Amendment Act, 1852, the provisions of the 5 & 6 Wm. IV. c. 83, and of 7 & 8 Vict. c. 69, as to disclaimers and memoranda of alteration, are directed to apply to patents under that Act. The same section declares that no action shall be brought upon any letters patent which, or the specification of which, has been altered by disclaimer or memorandum, in respect of any infringement committed prior to the filing of the disclaimer or memorandum, without the express permission of the law officer. It is further declared, that the filing of any disclaimer or memorandum of alteration, in pursuance of the law officer's leave, shall, except in cases of fraud, be conclusive as to the right of the party to enter such disclaimer and memorandum.

The judges of the Court of Queen's Bench having decided, in the case of *Holmes v. London and North-Western Railway Company*, that a patent for an improved turn-table for railway purposes was invalid, because the patentee had not limited his claims to the combination of the parts of the machine, but had described, and was therefore considered to have claimed, the several parts, some of which were old, the assignee of the patent applied to the Solicitor-General for leave to enter a disclaimer of the separate parts of the turn-table, so as to confine the claim of invention to the combination of parts forming the whole apparatus. The Solicitor-General (1853), after hearing counsel in opposition, as well as for the applicant, granted the leave

sought for, upon the terms of the applicant undertaking not to bring or prosecute any action or suit against certain parties, in respect of any turn-tables made or used by them before the date of the disclaimer. (Macr. P. C. 31.) See also, in the matter of *Smith's patent* (Macr. P. C. 232).

The principle of the above cases has lately received considerable extension in *Re Medlock's patent*, the facts of which are stated in an article in Newton's Lond. Jour. vol. 22, n. s. 69. This was an application for leave to enter a disclaimer of a patent for preparing a red or purple dye by treating aniline with dry arsenic acid. The patent had been the subject of considerable litigation, which had resulted in its being declared invalid on the ground that two alternative processes were described in the specification, of which confessedly only one would answer (see *Simpson v. Holliday*, 13 W. R. 577, cited *ante*, p. 125). The present application was opposed by several chemical manufacturers, several of whom had been defendants in the various suits instituted by the owners of the patent. After hearing counsel on both sides, *Collier, S. G.*, granted the leave sought for, but only on the terms that the applicants should bring no action against the opposers "for any infringement of the patent by the use or continued use, during the continuance of the patent, of any processes for manufacturing red and purple dyes in use by them at the present time." The applicants refused to accept this condition, and the Solicitor-General consequently disallowed the disclaimer.

The law officer, however, will not always insist upon the patentee giving an undertaking of this nature. He may think it right that the past infringement of the

patent should be paid for. (*Re Lucas's Patent*, Macr. P. C. 234.)

In the matter of *Bateman and Moore's patent* (Macr. P. C. 116), an application was made (1854) to *Bethell, S. G.*, for leave to alter the specification, so as to make it disclaim all the parts of the invention, and claim only the combination. The Solicitor-General said, that he should require to see from the specification itself that it had not been intended to claim the separate parts, but their combination only. Finding some indication of an intention to claim the apparatus as a whole, he gave the patentees permission to reject certain words in the claiming part of the specification which were inconsistent with such a construction. When some distinct and separate part of the invention is clearly old or useless, then there is no difficulty in excising it from the specification by a disclaimer. But where this is not the case, the entry of a disclaimer before a trial at law is a matter of doubtful policy. In the reported cases of the allowance of disclaimers, trials at law had previously taken place, wherein the difficulties and objections to be obviated had been pointed out.

Every disclaimer which will have the effect of extending the exclusive right granted by the patent will be void by the language of the Act. For example, if the specification showed that the parts were claimed, and not their combination, then a disclaimer which sought to reject the parts, and to insert a claim for the combination alone, would be bad, inasmuch as this would be an attempt to extend the original privileges of the patent. The operation of a disclaimer was considered in the case of *Seed v. Higgins* (8 E. & B. 755). The

patentee described in his specification, and illustrated by drawings, some machinery for preparing cotton, and after saying that the apparatus so described represented one particular and practicable mode of carrying out the invention he proceeded to state that he did not intend to confine himself to this particular method, but claimed as his invention the application of the law or principle of centrifugal force for a certain purpose. He afterwards disclaimed his claim to the application of the law or principle, except only the application of centrifugal force acting in a certain manner as described in the specification.* This was held to be a limitation of his claim to the particular apparatus described, whereby the principle was applied in a certain way, and afforded no ground for contending that the disclaimer described a different invention from that described in the specification. This view was also taken on appeal by the Court of Exchequer Chamber (8 E. & B. 771) and by the House of Lords (8 H. L. C. 550). But in the case of *Ralston v. Smith* (11 C. B. n. s. 471) it was decided by the Court of Exchequer Chamber, and afterwards by the House of Lords (13 L. T. n. s. 1), that a disclaimer is bad which is in effect an attempt to turn a specification for an impracticable generality into a grant for a specific process, comprised within the generality in one sense, but not to be discovered there without going through the same course of experiment which led to the discovery of the specific process in the disclaimer.

By the fifth section of the 7 and 8 Vict. c. 69, the right to enter a disclaimer or to amend is given to an assignee who has acquired the whole interest in the patent. When the patentee has assigned part of his

interest only, the patentee and assignee must join in making any disclaimer or alteration.

Under the language of that part of the section which enacts that "no objection shall be made, in any proceeding whatsoever, on the ground that the party making such disclaimer or memorandum of alteration had not such authority in that behalf," it was held that the disclaimer of a patentee who had assigned all his interest in the patent could not be objected to (*Wallington v. Dale*, 7 Exch., 888). Mere clerical errors may be amended by the order of the Lord Chancellor or Master of the Rolls without the necessity of filing a memorandum of alteration (*Re Sharp's Patent*, 3 Beav. 245; *Re Redmund*, 5 Russ. 44; *Re Rubery's Patent*, W. P. C. 1. 649; *Re Dismore*, 18 Beav. 538).

The M. R. refused to cancel a memorandum of alteration made under 5 and 6 Wm. IV. c. 83, when application was made to him for that purpose, on the ground that it extended the patentee's privilege, and infringed the petitioner's patent rights, for he held he had no jurisdiction (*Re Sharp's Patent*, 3 Beav. 245).

The application for leave to enter a disclaimer or memorandum of alteration, with respect to patents granted subsequent to the Amendment Act of 1852, must be made at the Patent Commissioners' Office, and it is then referred to the proper law officer. The petition must be impressed with the stamp of £5. Persons having adverse interests may lodge caveats (requiring a £2 stamp) at the office, and they are then entitled to notice when the application is heard by the law officer. Leave having been obtained, and the law officer's fiat issued, the disclaimer or memorandum of alteration is simply filed at the office, no enrolling being now required.

There appears to be no appeal from the decision of the law officer granting or refusing leave to file a disclaimer. In the case of *Medlock's patent* cited above (p. 154) the owners of the patent, after the Solicitor-General had refused his fiat, presented a petition to the Commissioners of Patents, submitting that the law officer having once granted his fiat it could not be recalled, and praying that the disclaimer and fiat might be filed, so that the validity of the conditions imposed might be tried in a court of law, or that the disclaimer might be referred to the Commissioners of Patents, or that the Commissioners would require a fuller statement of the case, and that the petitioners might be heard before them. The petition was, however, returned, endorsed with the word "refused." (Newton's Lond. Jour., vol. 22. n. s. 70, 71.)

CHAPTER IX.

CONFIRMATION OF LETTERS PATENT.

It sometimes happens that a patentee, who, when he applied for his letters patent, believed himself to be the first and original inventor of that for which he obtained the patent, afterwards discovers that some other person had invented or used the same invention, or part thereof, before the date of his patent, although it had not been publicly and generally used. Previous to the passing of the 5 & 6 Wm. IV. c. 83, such a patentee was in an unfortunate position, for his patent was altogether invalid. But the second section of that Act enacts, that if in any suit or action it shall be proved, or specially found by the jury, that any patentee was not the first inventor of the invention patented, or of some part thereof, by reason of some other person having invented or used the same before the date of the patent, or if such patentee or his assigns shall discover that some other person had, unknown to such patentee, so invented or used the same, it shall be lawful for such patentee or his assigns to petition the Queen in Council to confirm his patent, or to grant a new patent; and the Judicial Committee of the Privy Council 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 the patent, may report to the Queen their opinion that the prayer of the petition ought to be complied with, whereupon the Queen may, if she think fit, grant such prayer. The provisions of this Act are made applicable to the patents granted under the Patent Law Amendment Act, 1852 (see sect. 40.)

If the petitioner knows the name of the person whose previous use of the patented invention had invalidated it, the name must be mentioned in the petition; and if his name is unknown, the fact must be stated. (*Re Lamenaule's Patent*, W. P. C. 2. 164.) The Act provides that any person opposing such petition is entitled to be heard before the Judicial Committee; and that any person, party to any former suit or action touching such letters patent, is entitled to have notice of such petition before it is presented. The Committee requires some evidence of the patentee's belief, that at the time he applied for the patent he was the first inventor (*Re Card's Patent*, W. P. C. 2. 1 1).

The words of the statute are very general, but a discretion is clearly given to the Judicial Committee by the language of the Act; and the following cases will show the principles upon which they have proceeded in their decisions:—

In *Honiball's case* it was said that the jurisdiction to confirm letters patent should be very cautiously and sparingly exercised (9 Moore, P. C. C. 452).

Previous to the Patent Law Amendment Act, 1852, it was the practice to issue separate letters patent for the three kingdoms; and it was decided by the House of Lords, in the case of *Brown v. Annundale* (W. P. C. 1. 433), that the public use of an invention in England

rendered invalid a patent subsequently obtained for the same invention in Scotland. One Robinson, after obtaining a patent in England, obtained one for the same invention in Scotland, and then assigned the patents to one Pow, who, finding that, according to the decision of *Brown v. Amundale*, the latter patent was invalid, he petitioned the Privy Council for a confirmation. It was held, however, that the case did not fall within the terms of the Act, since the petitioner could not allege that "some other person" had used the same invention before the date of the Scotch patent, the user in question having been the patentee's or his assignee's. (*Pow's Patent*, W. P. C. 2. 5.)

Baron Heurteloup obtained a patent in 1834 for certain improvements in fire-arms. He subsequently discovered that part of his invention had been embraced by a patent granted in France in 1821, and that there existed a printed book in the British Museum containing a description of the French invention. The petitioner's affidavit, in support of his petition to the Privy Council, stated, that he believed himself to be, at the time of the grant, the true and first inventor of the patented improvements; and further, that he believed the French invention had never been brought into use in France or elsewhere, and that it was not known in England, otherwise than by the introduction of books printed in France, containing a description of the invention. Notice of the day of hearing had been sent through the post-office, addressed to the French patentee. Under these circumstances, their lordships reported that the case was a proper one for confirmation. (*Heurteloup's Patent*, W. P. C. 1. 553.)

There are other cases which show that the Privy

Council will not grant a confirmation where the previous user of the invention, which is alleged to invalidate a patent, and to call for the aid of the statute, continues up to the date of the patent. In order to afford ground for the interposition of the Crown, acting on the recommendation of the Privy Council, it must be shown that the previous user was not only not general, but that it had ceased, and was non-existent at the date of the patent, in which case a confirmation does injury to no one. On an application to confirm *Card's Patent* for improvements in the manufacture of candle-wicks (W. P. C. 2. 161), it appeared that another candlemaker had adopted the same method of making wicks before the date of the patent, and that he and his brother had practised it in different parts of the same country. It appeared, moreover, that one of them, and the assignees of the other, had continued to make wicks in that way up to the time of the hearing of the petition. The method had been mentioned by them to other people, and there was ground for supposing that another candlemaker had adopted it. The Judicial Committee considered that this was not such a case as the legislature had in contemplation when they passed the Act, and they refused the application.

Lamenaude obtained a patent on the 18th of July, 1848, for an invention of a method of fixing letters upon glass without wire or iron. It turned out, that somewhere between the 12th and 15th of the same month of July, some letters had been fixed upon glass by this very method by another person. This was sufficient to vitiate the patent, and an application was made to the Privy Council for a confirmation. It was argued that, although the invention had been publicly

used, it had not been generally used previous to the date of the patent, and it was proved that the person who had so used it was a consenting party to the application; but it was held that the statute did not apply to such a case as this, where the invention had already got into use, and was actually in use at the date of the patent. (*Lamenaude's Patent*, W. P. C. 2. 164.)

The Act was held not to apply to a case in which it was proved that two patents had been previously procured for substantially the same invention as that covered by the patent which it was sought to confirm, although the previous patents had expired. (*Westrupp and Gibbin's Patent*, W. P. C. 1. 554.)

Application was made for the confirmation of a patent granted in 1838 to Mr. Porter, for an improvement in the construction of anchors. It appeared that, after obtaining the patent, Mr. Porter had called on several anchor-smiths in various parts of the country, for the purpose of introducing his invention to their notice; and that when he called upon Messrs. Logan of Liverpool, they directed his attention to an anchor which they had invented in 1826. The construction of their anchor was similar to that of Porter's, and they had sold a few of that make to various shipowners. Notwithstanding this, Porter continued to work his patent, and when it was about to expire, he applied for and obtained an extension for six years. An alleged infringement having taken place, an action was brought by Porter's assignee, and on the trial the facts as to Logan's anchor came out. Porter's assignee then applied to the Privy Council for a confirmation of the extended patent; but it was held, that as the evidence

showed that not only Porter was not the original inventor, but that he was aware of the fact at the time he applied for an extension, this was not a proper case for the Crown to grant a confirmation, and the application was refused. "It is not easy," said *Mr. Pemberton Leigh*, on giving judgment, "to define the exact meaning of the expression, 'publicly and generally used' in the Act of Parliament. Their lordships would not consider the use of the invention on board a single ship, however public, or for whatever length of time, as a general user. They were satisfied that the invention had not been publicly used at the date of the original letters patent. Although Porter believed himself to have been the original inventor at the time when the original patent was taken out, it was clear that he could not think so at the time of the extension. Seeing that he was not the original inventor, the patent ought never to have been granted, and the prayer for extension should not have been listened to." (*Honibull's Patent*, 3 Eq. Rep. 225; *S. C. W. P. C. 2. 201.*)

CHAPTER X.

EXTENSION OR PROLONGATION OF LETTERS PATENT.

NOTWITHSTANDING the merit and utility of his invention, a patentee sometimes finds himself nearly at the expiration of the term for which his patent was granted, without having reaped the reward which he was fairly entitled to expect. This may have happened from various causes. To perfect the invention, to work it out, and to bring it before the public, may have been attended with great expenses, which were never repaid. It sometimes occurs that the public are slow to acknowledge the merit of an invention of real value, and the patentee's privilege is on the point of expiring before they can be brought to extend their patronage to it. It may be that the patentee's monopoly has been infringed, and that large costs have been incurred in enforcing or defending his just rights. Or it may be that the patentee did not himself possess the means, and was never fortunate enough to meet with a capitalist to advance what was necessary to work the invention. From some one of these causes, or from several of them combined, it not unfrequently occurs that a patentee fails to derive any benefit, even if he escapes loss, from an invention of sterling merit and utility. Previous to the passing of the statute 5 & 6 Wm. IV. c. 83, there was no mode of obtaining the extension of a patent privilege except an Act of Parliament, which was attended with considerable cost.

But a much less expensive mode was provided by the fourth section of that Act, namely, by petition to the Queen in Council; and her Majesty was empowered, after report from the Judicial Committee, to grant new letters patent, for a term not exceeding seven years after the expiration of the first term. In case the patentee believes that a further term of seven years will not suffice for his reimbursement and remuneration, then he may proceed, under the second section of the 7 & 8 Vict. c. 69, and apply for a longer period of extension, which cannot, however, exceed fourteen years. The benefit of these enactments is extended, by the fourth section of 7 & 8 Vict. c. 69, to the assignee of a patentee; and the provisions of these Acts, and of the Act 2 & 3 Vict. c. 67 (to be noticed hereafter), are extended to patents granted under the Patent Law Amendment Act, 1852, by the fortieth section of that Act, and the seventh section of 15 & 16 Vict. c. 115. An assignee is allowed to apply for an extension, but he does not stand altogether in the same favourable position as the patentee. It is chiefly with the view of rewarding the inventor that the extension of a patent is to be considered. If, however, the assignee be a person who has assisted the inventor with funds to enable him to perfect the invention and bring it into use, this will be looked at by the Privy Council as a favourable feature of a petitioning assignee's case, (*Norton's Patent*, 1 Moore, P. C. C. n. s. 339; *S. C.* 9 Jur. n. s. 419) in which case the petitioners, who were a public company, were refused a prolongation which they applied for after the death of the inventor. See also the case of *Napier's Patent* (13 Moore, P. C. C. 543).

The proceedings commence by the insertion of advertisements in the public prints, giving notice of the patentee's intention to apply for a prolongation of his patent, and a petition setting forth the facts must then be presented to her Majesty in Council. Any person is entitled to enter a caveat, and to be heard in opposition when the case is entered upon before the judicial committee of the Privy Council (*Lowe's Patent*, 8 Moore, P. C. C. 1).^{*} Not more than two barristers will be heard on each side; that is to say, two in support of the applicant's case, and two in opposition. Where, however, more parties than one oppose, and they have separate and independent grounds of opposition, each will be allowed two counsel. All facts material to the petitioner's title must be stated in the petition. In one case when such facts were omitted the hearing was postponed, and the petition directed to be amended (*Hutchison's Patent*, 14 Moore, P. C. C. 364).

The petitioner must be prepared at the hearing with evidence to show that there is an invention; that the invention possesses utility and is a benefit to the public; and if his case is that he has never been reimbursed his expenses, he must give reasonable evidence of the amount of his loss. If, however, there is a balance of profit, but to an extent incommensurate with his fair expectations, he will be required to show what the real profit has been. The accounts must be clear, unreserved, and properly proved (*Re Hills' Patent*, 1 Moore, P. C. C. n. s. 258; *S. C. 9 Jur.* n. s. 1209). The profit, year by year, must be shown (*Perkin's Patent*, W. P. C. 2. 6). If books of account are not forthcoming,

^{*} As to the right of an alien living abroad to be heard in opposition to a prolongation of Letters Patent, see *Schlumberger's Patent* (8 Moore, P. C. C. 1)

the petitioner will be required to explain their absence. (*Markwick's Patent*, 13 Moore, P. C. C. 310.) In taking an account of the profits and loss, the patentee is entitled to charge for loss of time in endeavouring to bring the invention into use. (*Newton's Patent*, 14 Moore, P. C. C. 156.) Law expenses incurred by the patentee in maintaining his rights are in general allowed in deduction of profits, but this will not be done when the patentee has compromised suits and given up costs to which he had an apparent title (*Hill's Patent*, 1 Moore, P. C. C. n. s. 258; *S. C. 9 Jur. n. s. 1209*). If the invention has not been brought into use, that circumstance which will be taken as a thing presumptive of inutility must be explained; and the petitioner must shew that the parties interested had done all in their power to bring the invention into public use (*Wright's Patent*, W. P. C. 1. 575; *Woodcroft's Patent*, W. P. C. 2. 29; *Markwick's Patent*, 13 Moore, P. C. C. 310).

It is open to those who oppose the patentee's application, to go into evidence for the purpose of showing that the invention is wanting in novelty, or that it is imperfect; and they may likewise point out defects in the specification.

The fact of improvements having been made by other persons in the patentee's invention after the date of his patent, does not afford any ground of opposition to an application for an extension, if the invention has a merit of its own, and if the patentee has not reaped a benefit in proportion to that merit (*Galloway's Patent*, W. P. C. 1. 727). Where a patent seems deserving of prolongation only in respect of one head of invention out of several, the prolongation will be granted solely with reference to that head (*Bodmer's Patent*,

8 Moore, P. C. C. 282; *Lee's Patent*, 10 Moore, P. C. C. 226).

Where the ground of opposition to a patentee's application is frivolous, costs have been awarded to him; on the other hand, costs of opposition have been given against a petitioner who abandoned his application (*Mackintosh's Patent*, W. P. C. 1. 739).

The second section of 2 & 3 Vict. c. 67, directs that the petition for an extension of letters patent shall be presented at least six calendar months before the expiration of the original term. If the petition shall not have been prosecuted with effect before the expiration of that term, from other causes than the neglect or default of the petitioner, the committee of the Privy Council is empowered to entertain the application, and to report thereon, although the original term may have expired before the hearing of the application. But sufficient reason must be shown to the satisfaction of the committee for the omission to prosecute with effect the application before the expiration of the original term. The new letters patent bear date the day after the expiration of the original term. If any one should use the invention in the interval between the expiration of the original term and the grant of the new patent, he is not liable for an infringement. Moreover, those who may have invested capital in working it during that interval may attend before the committee, and oppose the application, or prefer a claim to have their acts protected, and their expenditure made good (*Russell v. Ledsam*, 14 M. and W. 574).

If litigation, involving the question of the validity of the patent, should be going on at the time of the application for a prolongation, the committee will not go

into the question, but will assume the patent to be valid (*Betts' Patent*, 1 Moore, P. C. C. n. s. 49; *S. C. 9 Jur. n. s. 137*; *Pract. Mech. Journ.* 2nd ser. vol. 7, 270), unless the invalidity is beyond all reasonable doubt, in which case they will not grant an extension (*Woodcroft's Patent*, W. P. C. 2. 30; *Hills' Patent*, 1 Moore, P. C. C. n. s. 258; *S. C. 9 Jur. n. s. 1209*). If a competent tribunal should, after the grant of a new patent, decide that the original patent was invalid, the new patent will share its fate, and will be invalid likewise (*Kay's Patent*, W. P. C. 1. 571). On the hearing of the application to extend the term of *Honiball's Patent*, (3 Eq. Rep. 230; *S. C. W. P. C. 2. 208*), it was said that the grant of an extended term is to be considered as a new grant by new letters patent, subject to the same conditions, open to the same objections, and in ordinary cases entitled to the same advantages as the original grant. So that in point of fact, the extension decides nothing, one way or other, as to the validity of the patent. And therefore, where it is only a matter of doubt as to the validity of the patent,—as, for example, where the evidence is conflicting,—the extension will be granted, if there appear good grounds *aliunde* for that course. When it appeared that a patentee had agreed by deed with a public company to grant them an exclusive license, and also covenanted with them to obtain at the expiration of the term a prolongation of the patent for the same purpose, the application for a prolongation was refused by the Privy Council on the ground that the agreement was contrary to public policy, and repugnant to the spirit of the statute 5 & 6 Wm. IV. c. 83 (*Cardwell's Patent*, 10 Moore, P. C. C. 488).

Intentional delay for a prolonged period on the part of an inventor in attempting to bring his invention into use is a good reason for refusing to grant an extension (*Norton's Patent*, 1 Moore, P. C. C. n. s. 339; *S. C. 9 Jur. n. s. 419*).

In the case of a patent obtained for an invention imported from abroad, which invention had been patented in a foreign country, application was made to the Privy Council for an extension after the expiration of the foreign patent; but it was held that the application could not be entertained, inasmuch as an extension of the British patent would be invalid, by virtue of the twenty-fifth section of 15 & 16 Vict. c. 83, and the seventh section of 16 & 17 Vict. c. 113 (*Aube's Patent*, 9 Moore, P. C. C. 43).

The policy of these enactments is to prevent in the case of inventions made and patented in a foreign country the continuance of a monopoly in this country by virtue of any patent subsequently granted here beyond the time when the discovery shall have become public property in the foreign country, and this policy will guide the Judicial Committee in the exercise of their discretion even when the case does not fall strictly within the Act; as, for instance, when the patent sought to be prolonged was granted before the Act was passed, and a foreign patent, which would shortly expire, had been granted before the date of the English patent (*Hills' Patent*, 1 Moore, P. C. C. n. s. 258; *S. C. 9 Jur. n. s. 1209*).

But these sections do not apply to a patent first granted in the United Kingdom (*Re Betts' Patent*, 1 Moore, P. C. C. 49; *S. C. 9 Jur. n. s. 137*), except in those cases where the foreign patent is dated only a

short time after the British patent. To grant a prolongation in such cases would be acting contrary to the spirit of the Act (*Newton's Patent*, 14 Moore, P. C. C. 156; *S. C.* 9 Jur. n. s. 109).

Patentees applied for a prolongation of their patent, and obtained a recommendation from the Judicial Committee of the Privy Council, upon which an order was drawn up for a prolongation. A petition was afterwards presented to the Crown, seeking to revoke this order, and this being referred to the Judicial Committee, it was held that this committee has authority, under 3 & 4 Wm. IV. c. 4, s. 4, to entertain such a petition, and to recall the warrant for sealing the letters patent. The Crown can at any time before the great seal is affixed countermand the warrant for sealing, upon a proper case being made out (*Schlumberger's Patent*, 9 Moore, P. C. C. 1).

The jurisdiction conferred upon the Judicial Committee by the legislature is an extraordinary one, and is to be exercised, as remarked in the Council Chamber, only on the most special grounds alleged and proved in reference to each case. In coming to a decision, they seek to meet the justice of the case with regard to the adequacy or inadequacy of the patentee's remuneration. If he has met with loss, as the total result of his transactions under the patent, there is good *prima facie* ground for an extension; but if a certain amount of profit has been derived from working the patent, a decision is less easily found. The main question, however, remains the same:—Has the patentee been adequately rewarded? It is obvious that the merit of the invention is now an element to be considered, since £100 may very well reward an invention of small utility,

whilst £1000 may be an inadequate payment for a discovery of great public benefit. The degree of inventive power may also very well be taken into consideration, and the more or less time and trouble expended by the inventor in making experiments, either previous to his discovery, or in testing it, or in carrying it out. It is not, however, to be assumed, that because the step in improvements taken by an inventor is small, his merit is likewise small, and his invention unimportant. A very small addition or alteration may have altogether escaped notice, until seized and turned to account by an acute mind, and its adoption may lead to most important consequences in the manufacture with which it is connected. The reward of such an invention ought not to be made proportionate to its apparent insignificance. Common justice dictates that the benefit an inventor has conferred on the public ought to be regarded; and the advisers of the Crown, acting under this idea, will give him the opportunity of reaping a recompense in some degree commensurate with the value of the result. In delivering judgment on an application to the Privy Council for an extension of *Soames' Patent* (W. P. C. 1. 729), *Lord Brougham* used these words:—"The whole history of science, from the greatest discoveries down to the most unimportant—from the discovery of the system of gravitation itself, and the fractional calculus itself, down to the most trifling step that has ever been made—is one continued illustration of the slow progress by which the human mind makes its advance in discovery. It is hardly perceptible, so little has been made by any one step in advance of the former state of things, because generally you find that just before there was

something very nearly the same discovered or invented." His lordship proceeded to say, that in the case of a new principle or a novel invention—for instance, a new process—the smallness of the step did not furnish any argument against its importance. But when a new application only is under consideration, such an application as might easily suggest itself to any person—a new application of a well-known simple process, which had been employed with respect to other substances—then, when a patentee comes to apply for an extension of his patent, the smallness of the step involved in the patented invention will be taken into consideration in determining the length of the extension. In this case, the invention consisted in an application of mechanical pressure to separate the solid and fluid constituents of cocoa-nut oil. The invention having been of moderate benefit to the public, the moderate extension of three years was granted to the patentee. (See also *Hills' Patent*, 1 Moore, P. C. C. N. s. 258; *S. C. 9 Jur. N. s. 1209.*)

We shall proceed to mention a few cases of applications for extension of letters patent, which will illustrate what has been said. On an application for an extension of a patent granted to James Kay, for improved machinery for preparing and spinning flax, it was shown that the patentee had expended £500 in experiments, £500 in obtaining his patent, £2200 in law expenses, and that he had made about £6800 profit. The invention was one of great utility, was used by nearly all the flax-spinners in the kingdom; but looking at the sum already cleared by the patentee, it was thought that a prolongation for three years would satisfy the justice of the case. (*Kay's Patent*, W. P. C. 1. 568.)

Richard Roberts obtained a patent for improvements in spinning-jennies, the value of which was so great, that during the last three or four years of the original term, £5000 a year had been made by the patentee. In consequence, however, of piracies, of combinations amongst workpeople, but chiefly of a fire, supposed to have been the act of an incendiary, which destroyed the patentee's premises, and entailed a loss of £10,000 beyond the insurance, the profits did not reach the amount of loss by several thousand pounds. The committee of the Privy Council, guided by the ingenuity of the invention, and the peculiar character of the resistance to its introduction, were of opinion that seven years' prolongation was merited. (*Roberts' Patent*, W. P. C. 1. 573.)

L. W. Wright applied for an extension of his patent for improvements in bleaching apparatus, and gave evidence before the committee of his pecuniary embarrassments, and the disputes which had arisen out of his partnership with various persons; which embarrassments and disputes had prevented the introduction of the invention to the trade. He showed that the invention had been successfully practised by several bleachers, but that he had hitherto derived no benefit whatever from it. The committee reported that it would be proper to prolong the term for seven years. (*Wright's Patent*, W. P. C. 1. 575.)

A patent for a new method of preparing iron plates for tinning was granted in 1839 to Thomas Morgan, who, being unable to work the invention, had sold his patent right for £200 to persons who applied, in conjunction with the patentee, for an extension of the term. The assignees had made a profit of about £1000

a year for three years, and the patentee, in addition to the sum received from them, was making about £2 a week out of the patent. The invention appearing to possess only a moderate degree of merit, the committee thought that the benefit received by the patentee and his assignees was a sufficient reward, and they refused the application. (*Morgan's Patent*, W. P. C. 1. 737).

A patent for printing yarns of any fibrous materials was granted in 1828 to Bennet Woodcroft, who, on the expiration of the original term, applied for an extension. The patented process gave to cloth made of yarn, printed by it, a peculiarly clouded appearance, and the invention gave rise to the manufacture of clouded silks and fabrics. During the first four years of the patent, £7000 were realized under it. Certain duty, however, was taken off other goods, and from this cause and others a large capital invested in working the patent ceased to be profitable, and the patent right became of small value. At a subsequent time, the invention, under an improved form, was stated to have become of considerable value, and it was thought proper to apply for an extension of the patent. But the committee, having regard to the amount of profit already realized, and to the fact that the invention, in its improved and valuable form, was introduced from abroad by other persons than the patentee, refused the application.

In 1840, Orlando Jones obtained a patent for improvements in the manufacture of starch. His method consisted in applying a weak solution of caustic alkali to rice. It was shown, at the hearing of an application for an extension of the patent, that the principle

of the invention had been discovered by another person prior to the date of Jones' patent, although Jones was not aware of the fact. The invention being thus shown to have no novelty, the application was refused, and costs to the amount of £100 were decreed against the petitioner.

On the application for an extension of Derosne's patent, for improvements in refining sugar, it appeared that the patentee's net profit had been about £3300. But the benefit to the public was so great, being appreciable in every pound of sugar consumed, that an extension of six years was granted. (*Derosne's Patent*, W. P. C. 2. 1.)

G. F. Muntz applied for an extension of his patent, for improvements in the manufacture of sheathing for ship bottoms, and showed that he had made £55,000 by the manufacture during the existence of the patent. The applicant contended that this sum did not represent his profit as an inventor and patentee, but his profit as a manufacturer. But the Committee of the Privy Council said it was impossible to sever these two heads of profit. It was by means of the patent that he had made the profit. It had given him a monopoly preference; because, as patentee, he was enabled to sell and trade in a manner which, but for his invention and his patent, he could not have done. The application for a prolongation of the patent was refused (*Muntz's Patent*, W. P. C. 2. 113). See also *Hills Patent* (1 Moore P. C. C., n. s. 258; *S. C.* 9 Jur., n. s. 1209).

A. M. Perkins obtained a patent in 1831 for improvements in an apparatus for heating air in buildings, heating fluids, etc. He applied, in 1845, for an extension of the patent, on the ground that he had been

inadequately rewarded. The ingenuity of the invention, and its application to a great number of purposes, having been shown, the accounts were investigated, when it appeared that there had been a profit of £15,176 upon gross receipts to the amount of £64,920. The patentee claimed further to reduce the sum representing his profits, by deducting £500, the cost of experiment, £2700 interest at five per cent. on the average amount of capital employed, and £5400 for an allowance of £400 a year to the patentee for his personal superintendence of the business. These sums reduced the profits to £6576 net. An extension of five years was granted, the invention being ingenious and useful. (W. P. C. 2. 7.)

An application for the extension of a patent for improvements in the manufacture of steel was opposed on the ground that, whereas the patented process consisted in the addition of carburet of manganese to the crucible, it had been subsequently discovered that a better process of making steel was to place carbonaceous matter and manganese separately in the crucible, and this process obtained generally in practice. The Privy Council thought that the merit of the original invention was not thereby materially detracted from, and they granted an extension for seven years. In granting so long a time, the litigation going on in the courts of law was taken into account, as it was thought probable that some time would elapse before the litigation would terminate, and the patentee's representatives have the benefit of the extension granted. (*Heath's Patent*, W. P. C. 2. 257.)

Whitehouse, an ingenious mechanic, procured a patent for improvements in the manufacture of iron tubes,

which he assigned to his master, Russell, who laid out £14,000 in works to carry out the manufacture. The tubes were in great demand, being applicable to a variety of new purposes; but, as the manufacture was simple, many expedients were resorted to to evade the patent, and Mr. Russell was involved in much litigation, in consequence of which, combined with the loss incurred by surreptitious manufacture and sale, his profits were very considerably reduced. On these grounds he applied for a prolongation of the patent, and produced evidence before the committee to show the value and importance of the invention, the losses he had suffered from infringements, and the great reduction that would take place in the value of the premises and machinery (much of which was fitted only for the particular manufacture) if the patent were thrown open. He further showed that his life had been endangered by the anxiety of certain law proceedings. One witness stated that, if the manufacture were thrown open, it would hardly be worth following; the process was so beautifully simple, that it would almost be within the reach of any person of capital. The net profits amounted to about £13,000; but this was shown to be not much greater than the ordinary profits on stock without the protection of a patent. Taking all this into consideration, seeing that the invention was of extraordinary merit, and that Mr. Russell had suffered greatly from the annoyance and anxiety occasioned by the litigation to which he had been subjected, the committee thought the patent ought to be extended for six years, the original patentee receiving £500 a year out of the profits for that time. (*Whitehouse's Patent*, W. P. C. 1. 473.)

A patent for forging and shaping small articles in metal was obtained by Mr. Ryder in 1841; when he applied for an extension, he pleaded that though the profits had been £7000, they had only been made during the last four years. This, however, was held to be no ground for the application in the face of the large sum realized, and the petition was dismissed. (*Ryder's Patent*, Pract. Mech. Jour., vol. 7, p. 238.)

It will have been remarked, that the maximum period of extension in these cases was seven years. To induce the Judicial Committee to recommend an extension for fourteen years, a case of the strongest kind must be made out.

In *Ruthven's Patent* (Pract. Mech. Jour., 2d series, vol. 8, p. 159), which was a patent for improvements in the propulsion of vessels, the invention was proved to have been of very great merit, and to have failed in being brought into general use through circumstances altogether independent of the will and without the fault of the inventor, who had not merely derived no profit but had suffered considerable loss from his patent. It was shown, moreover, that the Admiralty had then lately instituted experiments with a view to the adoption of the invention, and that several friends of the inventor were willing to embark large capital in working the invention, should a prolongation be obtained. Evidence was also given that from the nature of the invention it would necessarily be a long time before its merit could be properly brought before the public. Under these circumstances the Judicial Committee (stating that they considered the case exceptional) granted a prolongation for the unusual period of ten years.

Where the invention is one of great merit, and the patentee has assigned his interest in it to another person for a sum which, looking at the profits likely to be derived from working the invention, appears an inadequate consideration, the Privy Council will see that the patentee receives further reward. With this view, a condition is sometimes introduced into the new patent, making it void in case a fixed annual sum, or a certain share in the profits, be not paid to the patentee by the assignee. (*Whitehouse's Patent*, W. P. C. 1. 473; *Hardy's Patent*, 6 Moore P. C. C. 441.) So also where a patentee had mortgaged his patent, and he and his mortgagees asked for a prolongation, it was granted to the patentee alone. (*Bovill's Patent*, 1 Moore P. C. C. N. S. 348.) Other special conditions are sometimes inserted in the new letters patent; for example, that the patented article should be sold to the public at a certain price (*Hardy's Patent*, 6 Moore P. C. C. 441); or that the Admiralty should have the privilege of using the invention (in this case, an improved propeller for steam and other vessels) without licences from the patentee (*Pettit Smith's Patent*, 7 Moore, P. C. C. 133). In the cases of *Lancaster's Patent* (2 Moore, P. C. C. N. S. 189), and *Carpenter's Patent* (*ibid.* 191), however, the Judicial Committee refused to insert this latter condition; and it would seem to be now unnecessary since the recent case of *Feather v. The Queen* (Pract. Mech. Jour. vol. 10, N. S. 321), where it was held that notwithstanding the grant of Letters Patent, the Crown has power to use the invention without the assent of the patentee. For instances of other special conditions introduced into the new letters patent, see *Bodmer's Patent* (8 Moore, P. C. C. 282); *Normandy's Patent* (9 Moore, P. C. C. 452).

CHAPTER XI.

ASSIGNMENTS OF LETTERS PATENT AND LICENCES.

Power both to assign and to license is by implication given to the patentee by the letters patent. To be a valid instrument, an assignment ought to be a deed under hand and seal. Previous to the Patent Law Amendment Act, 1852, letters patent contained a clause avoiding them, in case they became vested in more than twelve persons at the same time. But the 36th section of that Act declares that, notwithstanding any proviso that may exist in former letters patent, it shall be lawful for a larger number than twelve persons, hereafter, to have a legal and beneficial interest in such letters patent. In case of the death of the patentee before the expiration of the letters patent, they pass to his executors or administrators, and not to his heir.

It is usual to introduce into assignments covenants on the part of the patentee, that he is the first and true inventor, and that the patent is a valid one; and it may be well to make the patentee covenant to do what is necessary, in the event of an application to the Privy Council for a confirmation of the patent.

It is no answer to an action to enforce a contract for the purchase of a patent for a stipulated sum (*Hall v. Conder*, 2 C. B. N. s. 22), nor to an action to enforce payment of a royalty under a licence (*Smith v. Scott*, 5 Jur. N. s. 1356), to plead that the patent is wholly

worthless and of no utility, and that the subject-matter of the patent was not the novel invention of the plaintiff, there being no proof of fraud, and no express warranty. Such a contract was held merely to have the effect of placing the purchaser in the same situation as the seller was with reference to the patent, and the purchaser is bound to take it with all its faults. This being so, it is desirable to consider whether or not an express warranty of the patent should not be introduced into contracts of this nature. See also *Smith v. Neale* (2 C. B. N. S. 67).

A licensee during the continuance of the licence cannot set up as a defence to an action for the royalty that the invention was not new or that the patentee was not the first inventor. (*Noton v. Brooks*, 7 H. & N. 499; *Trotman v. Wood*, 16 C. B. N. S. 479.) But when in such a case the claim in the specification is susceptible of two constructions, one of which would make the specification bad and the other and more natural one would make it good, the licensee may insist that the latter is the true construction. (*Trotman v. Wood*, 16 C. B. N. S. 479.) Even where no formal licence has been executed, a person who has paid money in the nature of a royalty will not be allowed to dispute the validity of the patent. (*Crossley v. Dixon*, 10 H. L. C., 293; *S. C.* 9 Jur. N. S. 607.) Neither will a patentee after assigning all his interest in a patent for a valuable consideration be allowed, in an action against himself for an infringement, to raise the question whether the patent is void for want of novelty (*Walton v. Lavater*, 8 C. B. N. S. 162, 187); and see also *Chambers v. Crichley* (33 Bea. 374). Furthermore, a licensee will not be permitted to use the invention

without payment of the royalties he has covenanted to pay, even after the patent has been found invalid in proceedings between other parties. (*The Grover and Baker Sewing Machine Company v. Millard*, 8 Jur. n. s. 713.) But where judgment was given by consent before declaration filed in an action by a patentee against the members of a partnership firm for an alleged infringement, and the defendants immediately took a licence to use the invention, and the patentee subsequently instituted a suit to restrain infringement against the defendants at law and two fresh partners, it was held that the defendants in equity were not estopped from disputing the validity of the patent. (*Goucher v. Clayton*, 11 Jur. n. s. 107.)

Bearing in mind the decision in *Wallington v. Dale* (*ante*, p. 157) it may be well to insert in an assignment a covenant binding the assignor not to enter a disclaimer or file a memorandum of alteration without the written authority of the assignee.

Licences have various intents. In their most general form, they are tantamount to an assignment of the patentee's whole rights. But usually they are for a term shorter than that mentioned in the patent, and sometimes they do not extend to the whole of the invention. A licence may be restricted, likewise, to a particular district. What is called an exclusive licence is one by which the patentee binds himself not to empower any other person to exercise the patent privilege, either at all or within a given district.

A licence to A. to manufacture a patent article is an authority to his vendees to vend it without the consent of the patentee. (*Thomas v. Hunt*, 17 C. B. n. s. 183.)

The consideration for the grant of a licence is usually