

**LAW AND PRACTICE**  
**OF**  
**PATENTS FOR INVENTIONS**

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THE PATENTEE'S MANUAL

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A TREATISE

ON THE

LAW AND PRACTICE OF PATENTS  
FOR INVENTIONS

WITH AN APPENDIX OF

Statutes, Rules, and Foreign and Colonial Patent Laws  
International Convention and Protocol

BY

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# PREFACE

TO

## THE SIXTH EDITION

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IN preparing the Sixth Edition of this Work for the press, considerable changes have been made both by way of enlargement and in the arrangement of the matter. The provisions of three supplementary Acts of Parliament and of four new sets of official Rules, now consolidated with the previous Rules, have been noticed, whilst numerous decisions of the Courts during the last six years, many of which have an important bearing on the Law of Patents, have been cited. Several chapters have been divided with a view to a fuller and more convenient treatment of the subjects, and additional chapters on other branches of the law have been introduced. Every page has undergone careful revision, and no pains have been spared to render the treatise one that patentees and inventors may consult with confidence as a trustworthy exposition of that branch of law with which their interests are most closely concerned. It may be added, that although the treatise was originally written especially for their use, the authors venture to think that in its enlarged form it may deserve the notice of the legal profession, since the large experience of one of them in obtaining Patents, and in the conduct of litigation arising out of Patents for forty years, has been turned to account in the production of the volume.

Reprints are given of all the Acts of Parliament which have any direct bearing on the subject of this work ; as well as of the Rules and Forms issued by the Board of Trade under the authority of the Acts, of the Rules framed by the Law Officers in regard to proceedings before them, and of the Rules of the Privy Council with respect to applications for the extensions of Patents.

Great additions to and alterations in the Patent Laws of Foreign States and British Colonies have been made of recent years. The Appendix contains summaries of the whole of these laws to date, revised by professional correspondents.

The Appendix also contains a reprint of the International Convention and Protocol relating to arrangements for the mutual protection of industrial property including Patents. To this Convention Great Britain gave her adhesion, and a chapter has therefore been devoted to the subject in the body of the treatise.

A copy of the Rules lately issued by the Board of Trade in relation to applications for Patents under this Convention will also be found in the Appendix.

The copious Index will be found of material assistance by those readers who are in search of any particular topic.

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The following summary of the alterations effected by the recent Acts of Parliament may be given here, *memoriæ causâ* :—

The Act of 1883 abolished the Commissioners of Patents, who were replaced by the Board of Trade as the governing body of the Patent Office. The Comptroller-General is the chief officer of the Board, and upon him devolves the charge of managing the business and superintending the work of the office. The Board was authorised to make rules, having the same effect as if forming part of the Act, for regulating

the conduct of Patent business ; and it has accordingly promulgated a long series of rules for that purpose accompanied by forms.

The chief alterations in the procedure were :—1. Non-inventors may join with inventors in applying for a Patent. 2. The applications and specifications are referred to official examiners, who report whether the documents are in proper form ; if they are not in proper form, the Comptroller may reject them or require them to be amended before acceptance, subject to appeal to a Law Officer. 3. Oppositions to the grant of Patents are decided by the Comptroller, subject to appeal to a Law Officer. 4. The steps necessary to be taken for obtaining a Patent are fewer. 5. Applications and other documents may be sent to the Patent Office through the post-office. 6. Patents are sealed by the Comptroller with the seal of the Patent Office. 7. The Government fees are reduced from 25*l.* for a three years' Patent to 4*l.* for a four years' Patent, and the remaining fees of 50*l.* and 100*l.* are payable in small annual sums. 8. Applications for leave to amend specifications are decided in the first instance by the Comptroller and on appeal by a Law Officer. 9. A new mode of obtaining the repeal of invalid Patents is substituted for the old proceeding of *scire facias*.

Whilst the procedure underwent great alterations, the substantive law was but little touched. The old decisions of the Courts regarding the subject-matter of patentable inventions ; the incidents of utility and novelty which every patentable invention must possess ; the contents of specifications and the infringement of Patents still remain applicable to Patents issued under the late Act. The duration of a Patent is the same as before the Act, and its extent is practically the same, being only smaller by the omission of the Channel Islands. The principal changes to be noticed are :—1. The Board of Trade was empowered to order

patentees to grant licences if they make default in granting them on reasonable terms. 2. The right of the Crown to use patented inventions without making compensation was abolished. 3. A Patent may be assigned for any place in or part of the United Kingdom. 4. A British Patent no longer comes to an end at the expiration of any earlier foreign Patent for the same invention.

The three supplementary Acts have made a few alterations in the details of procedure, and cleared away some doubts as to the meaning of certain provisions in the master act. And by the latest of those Acts a Register of Patent Agents has been established, which has been committed to the charge of the Institute of Patent Agents.

To recapitulate in brief the changes effected by recent legislation: The provisions of many earlier statutes were consolidated and amended; several features hitherto unknown in our system were introduced; the procedure was simplified; the fees payable to Government on applications for Patents were reduced, and greater facilities for the payment of the subsequent fees were afforded.

It was hoped that by these changes the inventive talent of the nation would be stimulated into more vigorous action, and that hope has not been disappointed, as a glance at the statistics furnished by the Comptroller in his reports will clearly prove. The average annual number of Patents sealed in the four years prior and in the four years subsequent to the coming into operation of the Act of 1883 were 3,928 and 9,314 respectively. The annual number of applications for Patents during the first four years of the new system was on the average 17,108, but no fewer than 7,792 of them, that is, about 45 per cent., were annually abandoned or otherwise came to naught. The number of applications increases at the rate of about a thousand a year.



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**THE LAW**  
**OF**  
**PATENTS FOR INVENTIONS.**

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**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 who has duly succeeded to his rights; 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 was formerly secured to the inventor by letters patent passed under the Great Seal. It is now secured to him by a patent obtained at the Patent Office, 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.<sup>1</sup>

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 to the true and first inventor of such manufacture, which others at the time of making such letters patent*

<sup>1</sup> '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 the 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 Kingcraft. 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.)

*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. 'It is to be observed' (said Lord Justice James in the case of Von Heyden v. Neustadt, 50 L. J. n. s. Ch. 126) 'that the statute of James gives no right to the inventor. The statute is a statute for the abolishing and forbidding monopolies, and the sixth section, under which the Crown acts in these matters, is a mere proviso excepting from the operation of that Act certain patents or grants of privileges, which are to be "of such force as they should be if that Act had never been made, and of none other." And it is from the ancient power and prerogative of the Crown so saved and preserved that every patentee derives his monopoly. What the Crown could lawfully do, and has lawfully done, after that statute, is shown by the uniform tenor of the letters patent which have been since issued, by the advice and authority of every law officer and every holder of the Great Seal for upwards of two centuries and a half. The power of the Crown to grant letters patent of such tenor has never been brought in question.'*

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 Patents for inventions. It is not every kind of discovery that can be protected by a patent. The statute of James I. requires a patentable invention to be referable to some *manner of manufacture*, as these words have been interpreted by the courts of law.

Nor is it every one who may succeed in obtaining the grant of a patent for an invention that is able to sustain it

under strict legal scrutiny. In order that a patent should be held valid in a court of law :

1. *The Invention* must possess a certain amount of utility; must display some degree of novelty; and must have been attained by the exercise of some measure of ingenuity.

2. *The Patentee* must be the true and first inventor, that is, he must not have obtained the invention from another person (unless he has imported it from abroad); nor must he have derived it from a printed book; nor from a patent specification published in this country or introduced from abroad.

3. *The Specification*, that is the patentee's formal description of his invention, must be accurate, intelligible, and sufficient; it must point out distinctly what the patentee claims as his own; and must not claim anything that is not his own.

Besides treating of these subjects, the procedure in applications for patents will be explained in this volume. The Patent itself, its form, intent, and duration, and the dealings with it by way of Assignment and Licence, will be expounded. Various contentious matters, such as oppositions to grants, the infringement of patent rights, the revocation of patents, and the proceedings taken to restrain a patentee's threats will be dealt with. Certain collateral topics, such as the amendment of specifications, the registration of patents and of documents relating thereto, and the international and colonial arrangements for the reciprocal issue of patents, will be handled. A brief account of the Patent Office establishment, where the business of obtaining patents is transacted, will be given; and lastly, a short chapter on the Institute of Patent Agents will be found at the end of the treatise.

## CHAPTER II.

## THE SUBJECT-MATTER OR NATURE OF A PATENTABLE INVENTION—A BARE PRINCIPLE NOT PATENTABLE—PROCESSES—CHIEF CLASSES OF PATENTABLE INVENTIONS.

In proceeding to consider the subject-matter or nature of the inventions which may be legally protected by patents, 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, will be judged by the abstract rules of law applicable to the case.

As we have already remarked, it is not every kind of discovery which can be protected by a patent. No invention is patentable which does not fall within the language of the Act of King James, and is not referable to some 'manner of new manufactures.' It is true, as we shall see further on, that these words have received a very wide interpretation; still they have never been held to include such inventions and discoveries as that of an abstract principle without reference to any of its practical applications; or that of a game of skill or chance irrespective of the

appliances for playing it ; or that of a method of calculation unconnected with apparatus for working it; or that of a vegetable suitable for food ; or that of a natural substance applicable to a useful purpose, such as guano or mineral phosphate of lime ; or that of an elementary body such as a metal. Patents which relate to inventions and discoveries such as these can only be maintained when they are taken out for the manufacture of the apparatus required for the given purpose, or for methods of preparing the natural substance for some useful end.

Before giving examples of the chief classes into which those inventions which have received the sanction of judicial decision are divisible, it may be well first to clear the ground a little by making some remarks on the cases relating to Principles and Processes.

It has been repeatedly laid down by the Courts that

BARE 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 civilisation ; 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 *Hornblower v. Boulton*, 8 T. R. 95 ; Dav. Pat. Ca. 221) ‘to form a specification of a philosophical principle ; it would be something like an idea without a substratum.’

Neither are principles in a more restricted sense patentable, unless they are embodied in a concrete form and their application to some purpose of utility indicated. ‘You cannot’ (said *Alderson, B.*, in *Jupe v. Pratt*, 1 W. P. C. 145) ‘take out a patent for a principle. You may take out a patent for a principle coupled with the mode of carrying the principle into effect, provided you have not only discovered the principle, but invented some mode of carrying

it into effect. But then you must start with having invented some mode of carrying the principle into effect.' 'Undoubtedly' (said *Eyre, C. J.*, in *Boulton v. Bull*, 2 H. Bl. 468) '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 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.'

In the much-debated case of *Neilson v. Harford* (1 W. P. C. 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 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, after full consideration, thought that the plaintiff did not merely claim a principle, but a machine embodying a principle. 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 application of air heated up to red-heat, or nearly so, and the interposition of a receptacle for heating air between the blowing-apparatus and the furnace. And *Mr. Baron Alderson*, 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, said, '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.' (See *L. J. Lindley's* approving remarks on this dictum. *Automatic Weighing Machine Co. v. Knight*, 6 R. P. C. 308.)

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

The words of *Lord Justice Clerk Hope*, in the case of the *Househill Company v. Neilson* (1 W. P. C. 683), may be cited in reference to the same point. '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.'

Minter's patent was for an improvement in the construction of chairs, which consisted in the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acted as a counter-balance to the pressure against the back. The patentee having obtained a verdict at the trial of an action for the infringe-

ment of the patent, it was contended, on a motion for a nonsuit, that the patentee had claimed a *principle*, and not any particular means of carrying the principle into effect. Now, to a principle *per se* he was not entitled; and as to the particular means adopted, the defendant had not borrowed it. The plaintiff, it was further argued, had attempted to appropriate by his specification one of the first principles in mechanics, viz. the lever. 'But,' said *Lord 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 constituted the machine, and the patentee claimed that machine, and the right to make it, by the application of a self-adjusting leverage producing a particular effect. (*Minter v. Wells*, 1 W. P. C. 134.)

Again, *Sir W. P. Wood, V. C.*, said in *Dangerfield v. Jones* (13 L. T. N. S. 142), 'If, having a particular purpose in view, you take the general principles of mechanics and apply one or other of them to a manufacture to which it has never been before applied, that is a sufficient ground for taking out a patent, provided that the Court sees that which has been invented is new, desirable, and for the public benefit.'

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.

See also the remarks upon this subject of *Sir G. Jessel, M. R.*, in the case of *Otto v. Linford* (46 L. T. n. s. 39, Goodeve Patent Cases, 343).

PROCESSES.

It will have been observed that what the statute of King James 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 a mere method or process was embraced by these words of the statute. *Perhaps*, said *Lord Tenterden, C. J.*, in the case of *Rex v. Wheeler* (2 B. & A. 350), the statute '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 a doubt that a process is patentable. The patent contested in *Gibson v. Brand* (1 W. P. C. 631) was for a new or improved process or manufacture of silk. *Tindal, C. J.*, said that there was strong reason to suppose that a patent for a process, in the strict or proper sense of the term, might be good in law. Such certainly was the opinion of *Chief Justice Eyre* in *Boulton v. Bull* (1 Carp. R. 146). 'It 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.'

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 there-

fore a new manufacture. For example, in *Crane v. Price* (1 W. P. C. 377), 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 *Sir F. Pollock, C. B.* (*Stevens v. Keating*, 2 W. P. C. 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.'

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 fire-arms was held to be a patentable invention. But how could this be a manufacture in the ordinary meaning of the word? Again, in the case of *Hartley's Patent* (1 W. P. C. 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. Again, in the case of the *Electric Telegraph Company v. Brett* (10 C. B. R. 838), a method of giving duplicate signals at

intermediate stations was held to be properly the subject of a patent. In none of these cases was any new substance produced, nor any new machinery employed. 'Most certainly the exposition of the statute, as far as usage 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* (1 W. P. C. 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.' Again, *Coleridge, J.*, said, in *Bush v. Fox* (Macr. P. C. 176), manufacture includes both process and result. And in *Ralston v. Smith* (11 H. L. C. 223), *Lord Westbury* said, 'By the large interpretation given to the word "manufacture," it not only comprehends productions, but it also comprehends the means of producing them. Therefore, in addition to the thing produced it will comprehend a new machine, or a new combination of machinery; it will comprehend a new process or an improvement of an old process.'

In *Newall v. Elliott* (13 W. R. 11) the patent was for 'improvements 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 that 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, over-ruled the objection, and held the patent valid.

Previous to the patent granted to Wallington, gelatine had been made by submitting large pieces of hide to the action of caustic alkali, and by employing blood to clarify the product. Wallington's process consisted in cutting the hides into thin slices, and the use of blood was unneces-

sary. This was held to be a patentable invention. (*Wallington v. Dale*, 7 Exch. Rep. 888.)

#### CLASSES OF PATENTABLE INVENTIONS.

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, and yielding new results.*
2. *New contrivances applied to old objects or purposes.*
3. *New combinations of old parts, or of old and new parts, the subject-matter consisting either of material objects or of mechanical processes.*
4. *New methods of applying an old thing.*
5. *Chemical processes, sometimes in combination with mechanical contrivances.*

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

1. *New contrivances applied to new objects or purposes.* Several modern inventions of great commercial or social importance would fall under this head. Amongst them are conspicuous—Apparatus to be worked by electricity for transmitting messages from place to place on land; wire cables for transmitting messages by the aid of electricity across the ocean; telephonic apparatus for transmitting words from the mouth of a speaker to the ear of a listener at a distance; the art of photography; the art of electroplating. All these have been invented and made wonderful progress within the recollection of many persons now living.

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 rapidly, efficiently, or cheaply than the old contrivance. ‘There may be a valid patent’ (said *Lord Eldon* in *Hill v. Thompson*, 1 W. P. C. 237) ‘for a new combination of materials

previously in use for the same purpose, or for a new method of applying such materials.'

Again, where an invention effects a known purpose with new materials, it will be held a patentable process. Thus, Binney obtained a patent for the manufacture of packing for the joints of steam-engines. Feltmann afterwards obtained a patent for the same object, but he employed different materials for the packing stuff. The later patent was held to be good for a new process. (*Binney v. Feltmann*, 1 Griff, P. C. 50.)

A process by which a product is directly obtained when the old method of obtaining it was indirect may form the subject of a patent. Thus, it was held in *Booth v. Kennard* (1 H. & N. 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.

3. *A new combination of known parts or old processes producing a new result, or producing an old result in a more economical manner or more perfect form, whereby articles cheaper or better than had ever before been produced are rendered accessible to the public, will be held a meritorious and patentable invention.* It was held in *Crane v. Price* (1 W. P. C. 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; *Murray v. Clayton*, L. R. 7 C. 570; *Cannington v. Nuttall*, L. R. 5 H. L. 205; *Hayward v. Hamilton*, 1 Griffin P. C. 115.) ‘If there be’ (said *Lord Westbury* in *Spencer v. Jack*, 3 De G. J. & S. 346) ‘a combination of several things previously well known, which combination is attended with such results of utility and advantage to the public that the combination itself is rightly denominated a substantial improvement, it is impossible to deny that that is the subject of a patent.’ See further as to combinations in the chapter on the Complete Specification.

A new combination of processes may even consist of an old combination with the omission of one of the old processes, provided that some degree of invention has been manifested in arriving at the new combination or process. Thus in the case of *Russell v. Cowley* (1 W. P. C. 459) a patent had been obtained for an invention for manufacturing iron tubes, by welding them without the use of a mandrel, or internal support; and its validity being contested, it was held good. *Lord Lyndhurst* read the specification as claiming only the manufacture of tubes without a mandrel. By the new process, tubes could be made of greater length, of greater uniformity, and considerably cheaper, than before.

But the combinations for which patents are obtained frequently consist not only of old parts, but to some extent of new parts, which are themselves minor inventions and may be protected as such. If any one of the parts is new, it follows that the entire combination is new too.

The introduction into an old combination of a new shape of one of the old elements of that combination, which new shape invokes a physical law otherwise left on one side (e.g. employing a filament of carbon instead of a thick rod in an incandescent electrical lamp), is a good subject for a patent. (*Edison & Swan United Electric Light Co. v. Woodhouse* (first action), 4 R. P. C. 93.)

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. (See the section on Applications in Chapter V.) 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 v. Bull*, 2 H. Bl. 468, 1 Carp. 117.) 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 a 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*, 1 W. P. C. 154.)

In the case of *Cornish v. Keene* (1 W. P. C. 517) a patent for improvements in the manufacture of elastic fabrics was

contested. The patentee's mode of effecting his object was by introducing into the fabric threads of india-rubber, coated with filamentous material and 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 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) '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.'

A patent was granted for an improved mode of, and apparatus for, bending wood for the handles of walking-sticks, &c., and the specification described the apparatus as being a vice for holding a stick, previously softened in moist sand, placed close to a hollow mandrel, on which the bend-

ing was effected by sending a jet of lighted gas into it, and then securing the stick on the mandrel by a strip of steel. The heat stiffened the fibres of the wood, and the curvature was rendered permanent. In a suit to restrain the defendants from infringing the patent, its validity was called in question, on the ground that the invention was not new; but *Sir W. P. Wood, V. C.*, granted the injunction, saying, 'When it is stated that because wood is bent by coach-makers and others in a variety of ways by the application of heat, you cannot have a patent for the application of heat to the bending of walking-sticks, that is the same sort of reasoning that was pressed on the Court with reference to an invention for an improvement on navigation. It was said that the operation of a propelling power by presenting a screw-propeller to the action of water was nothing new—that it was like the action of a windmill with reference to the wind. That reasoning, however, did not succeed.' (*Dangerfield v. Jones*, 13 L. T. N. s. 142.)

5. *Chemical processes, sometimes in combination with mechanical contrivances*, whereby something useful is produced or effected. Under this head the following examples may be given: the distillation of bituminous minerals for the production of illuminating and lubricating oils (*Young v. Fernie*, 4 Giff. 597); the purification of coal gas by means of oxides, chlorides, &c. (*Hills v. London Gas Light Company*, 5 H. & N. 312); the precipitation of the solid animal and vegetable matter contained in sewage water with a view to its employment as manure (*Higgs v. Goodwin*, E. B. & E. 529); the preparation of dyeing materials (*Steiner v. Heald*, 6 Exch. 607; *Simpson v. Holliday*, 5 N. R. 340, L. R. 1 H. L. 315; *Badische Anilin und Soda Fabrik v. Levinstein*, 4 R. P. C. 449); the electro-deposition of nickel (*The Plating Co. v. Farquharson*, 1 Griffin, P. C. 187); the manufacture of alum (*Kurtz v. Spence*, 5 R. P. C. 161); the mixture of two or more substances in certain definite proportions forming a compound substance useful for its preservative, sanitary, or other useful properties (*Bewley v. Hancock*, 6 De G. M. & G. 402; *Muntz v. Foster*, 2 W. P. C. 103; *Bailey v. Robertson*, L. R. 3 App. Ca. 1055).

Many substances have been produced by chemists in their laboratories in small quantities, which, if they could be produced in large quantities at a moderate cost, so as to be merchantable commodities, would be extensively used by the public. 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 true and first inventor, and his patent will be supported because he has discovered a method of making for sale an article useful to the public, and has thereby created a new manufacture. 'What the law looks to,' said *V. C. Stuart*, in the case of *Young v. Fernie* (4 Giff. 611), 'is the inventor<sup>1</sup> 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 paraffine and paraffine oil. This brings it within the principle stated by *Lord Westbury, C.*, in the case of *Hills v. Evans* (4 De G. F. and J. 288). 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.'

<sup>1</sup> The inventor in this case was referred to by Professor Huxley, P.R.S., in his Anniversary Address to the Royal Society 1883, as 'Mr. James Young, a chemist whose skilful application of theory to practice yielded him a colossal fortune.'

## CHAPTER III.

## THE INCIDENT OF UTILITY.

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

If one of several heads of invention is useless the patent is void (*Morgan v. Seward*, 2 M. & W. 544; *Simpson v. Holliday*, L. R. 1 H. L. 315; *Templeton v. Macfarlane*, 1 H. L. C. 595). And if part of an invention is found to be meritorious and part useless, the patent is likewise void (*United Horsenail Co. v. Stewart*, 2 R. P. C. 132).

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. Seward*, 1 W. P. C. 196.) On the trial of *Palmer v. Wagstaff* (Newton's Lond. Journ. vol. xliii. p. 151), *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.

‘A patent for an invention which is merely to obstruct every subsequent improvement, which is to step in and prevent the exercise of the ingenuity of mankind and the introduction of other inventions adapted to the particular subject to which the invention may be applicable, cannot, in my judgment, be supported.’ (Per *Pollock, C. B.*, in *Crossley v. Potter*; *Macr. P. C.* 240.)

It is to be observed that the recital in the Letters Patent of the Crown’s willingness ‘to encourage all 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.

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; *W. P. C.* 192 *n.*; *Manton v. Manton*, *Dav. P. C.* 348.)

‘A mere trifling matter’ (said *Sir W. P. Wood, V. C.*, in *Dangerfield v. Jones*, 13 *L. T. N. S.* 142) ‘or a thing of no value will not do, inasmuch as the whole theory of the patent law is based upon the assumption that it is something of real value. You must show that you have invented something useful, a new and useful improvement in manufacture.’

It is a fatal objection to a patent that the invention as put into practice in the only way described in the specification is not only useless, but dangerous. (*Easterbrook v. Great Western Railway Co.*, 2 *R. P. C.* 207.)

‘In (patent) law utility means an invention better than the preceding knowledge of the trade as to a particular fabric. It does not mean abstract utility. . . . If there is any new point of utility in the invention which was not in any previous known thing, then you may say it is useful; but if you think it is not as good as those existing before, or no better than those existing before in any particular point, then you would say it was not useful.’ (*Mr. Justice Grove* to the jury in *Young v. Rosenthal*, 1 *R. P. C.* 41.)

When an action is tried before a jury, it is for them, not the Court, to decide the question of utility when the point

has been raised by appropriate pleadings ;<sup>1</sup> 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* (1 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 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. Seward*, 1 W. P. C. 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.

It has been decided over and over again that the slightest amount of utility is sufficient to sustain a patent. (Per *Mr. Justice Grove* in *Philpot v. Hanbury*, 2 R. P. C. 37.)

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.

It was held, however, in the case of *Lewis v. Marling*

<sup>1</sup> 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 *Rez v. Arkwright*, Dav. P. C. 138 ; *Manton v. Parker*, Dav. P. C. 327 ; *Manton v. Manton*, Dav. P. C. 333 ; *Bovill v. Moore*, Dav. P. C. 399 ; *Brunton v. Hawkes*, 4 B. & Ald. 541 ; *Russell v. Cowley*, 1 W. P. C. 467 ; *Hill v. Thompson*, 1 W. P. C. 237 ; *Minter v. Wells*, 1 W. P. C. 129 ; *Crane v. Price*, 1 W. P. C. 411 ; *Derosne v. Fairie*, 5 Tyr. 393 ; 2 Cr. M. & R. 476.

(1 W. P. C. 490) that the uselessness of part of an invention will not vitiate the patent, unless that part is described as something essential. The case 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 plaintiffs claim to be the inventors of a certain part of the machine not described as essential, and which turns out not to be useful.' *Bayley, J.*, 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* (1 W. P. C. 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. thought 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, and the patent was therefore held to be valid.

If an improvement of the trade (using these words in their commercial sense) has taken place in consequence of an invention, this affords a good test of its utility. 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.

It is a proof of utility that an article of commerce commands an extensive sale within a short time of the first manufacture and sale. It is also cogent but not conclusive evidence of novelty. (*American Braided Wire Co. v. Thomson*, 5 R. P. C. 113; *Ehrlich v. Ihlee*, 5 R. P. C. 198; *S. C. on App.* 5 R. P. C. 437.)

It does not, however, follow necessarily that a patent is bad because the invention is not commercially useful. (Per *Mr. Justice North* in *United Telephone Co. v. Bassano*, 3 R. P. C. 313; and see *Ehrlich v. Ihlee*, 5 R. P. C. 450.)

The element of commercial pecuniary success has no relation to the question of utility in Patent Law generally, though where the question is of improvement, by reason of cheaper production, such a consideration is of the very essence of the patent itself, and the thing claimed has not really been invented unless that condition is fulfilled. (*Badische Anilin und Soda Fabrik v. Levinstein*, House of Lords, 4 R. P. C. 462.) And in the same case (p. 466) Lord Herschell said: 'I do not think that it is a correct test of utility to enquire whether the invented product was at the time of the patent likely to be in commercial demand or capable of being produced at a cost which would make it a profitable speculation to manufacture it.' (See also *Kurtz v. Spence*, 5 R. P. C. 182.)

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 to be taken into consideration, when the question of utility is raised in a court of justice, that a machine has not been called for by the public. (*Morgan v. Seward*, 1 W. P. C. 186.)

But the utility of an invention must be judged by reference to the state of things at the date of the patent. If the invention was then useful, the fact that subsequent

improvements have replaced the patented invention, and rendered it obsolete and commercially of no value, does not invalidate the patent. (Per *Lindley, L. J.*, in *Edison & Swan Co. v. Holland*, 6 R. P. C. 283.)

It has also been said that if the invention is not worked by the inventor that fact is *primâ-facie* evidence of want of utility. But 'that' (said *Jessel, M. R.*, in delivering judgment in the case of *Otto v. Linford*, 46 L. T. N. S. 35) 'is subject to this observation, that you may make and vend an improvement upon it, and if you have found out immediately after you have patented your invention that it can be improved, it does not by any means show that the first invention was useless.' Then, referring to the case of *Renard v. Levinstein* (10 L. T. N. S. 177), which arose out of a patent for a dye, he said, 'There they never sold an ounce of dye made according to the patent because immediately afterwards the inventor had discovered an improvement, and they had always sold the improved dye, and they were obliged to call a witness to show that they had made a few ounces of dye and tried it, and that it would dye. The answer was that under those circumstances the mere fact of not selling the original dye was nothing at all. So in this case (*Otto v. Linford*) we have rather a stronger illustration, because the inventor has patented these modifications, and it turns out that what he has used, made, and sold have been almost entirely number threes. No. 1 itself does not appear ever to have been sold. But then they say that No. 1 will work, and they call witnesses to prove it, and there is no denial from the other side. Therefore there is evidence of utility. It is very small indeed as regards No. 1, but it is quite sufficient for the support of a patent; and as to this question of utility, as we know, very little will do.'

## CHAPTER IV.

## THE INCIDENT 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, the patent contains clauses rendering the grant voidable in case the invention is not a new invention as to the public use and exercise thereof, or in case the patentee is not the true and first inventor of the invention.

The meaning of all this is that if it should be proved that the invention is destitute of novelty the patent is void. If several distinct heads of invention are claimed in the specification, and one of them is old, that will invalidate the whole patent (*Turner v. Winter*, 1 W. P. C. 77 ; 1 T. R. 602 ; *Bloxam v. Elsee*, 6 B. & C. 178 ; *Morgan v. Seward*, 1 W. P. C. 196 ; *Kay v. Marshall*, 2 W. P. C. 71 ; *Cropper v. Smith*, 1 R. P. C. 87 ; S. C. 2 R. P. C. 17). The Crown having been misled as to the extent of the invention, the grant of a patent in respect of it is void. It was on this principle that the Court, in deciding *Morgan v. Seward*, looked at the cases of *Hill v. Thompson* (1. W. P. C. 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 claimed to be new, which considera-

tion failing, or, as it is sometimes expressed, the Crown being deceived, the patent is void.

The two chief questions under the head of Novelty are:—

1. Was the patentee the *true* inventor of that for which he has obtained a patent?

2. If so, was the invention new to the public at its date? This includes the narrower question, Was the patentee the *first* inventor of the subject-matter of his patent?

As regards the first of these questions it must be answered in the negative if the patentee obtained the invention from another person, inventions imported from abroad being excluded from consideration. And as to the second question it must also receive a negative reply, (i) if the invention had got into public use; or (ii) if the invention had become known to the public (*a*) by a description of it in a printed book accessible to the public; or (*b*) by a description in an earlier specification; or (*c*) by prior publication by the inventor or another person.

It has been broadly laid down that when the public has become possessed of an invention in any manner whatever, no valid patent for it can be subsequently obtained, either by the true and first inventor, or by any other person ('Hindmarch on Patents,' p. 33, referred to by the judges with approval in the cases of *Patterson v. Gaslight Co.*, L. R. 3 App. C. 235; *Lister v. Norton*, 3 R. P. C. 211; *Humpherson v. Syer*, 4 R. P. C. 414). There are, however, certain exceptions to the universality of this rule, as will be shown further on in this chapter.

The enquiry will be whether the invention had become part of the public stock of knowledge before the date of the patent. 'If that means' (said Lord Justice Fry in *Humpherson v. Syer*) 'the knowledge that every member of the public possesses, it is clear that the definition will meet very few of the cases in which publication has taken place.'

TRUE INVENTOR.<sup>1</sup>

A discovery may be both useful and quite new to the world at large; yet if it can be shown that the person, upon whose statement that he was the true inventor the patent was granted, does not really answer to that designation, the patent is not saved from the clause in the statute of James, which declares that all monopolies are invalid.

‘A man may publish to the world,’ said *L. C. J. Tindal*, in *Gibson v. Brand* (1 W. P. C. 628), ‘that which is perfectly new in all its uses, and has not before been enjoyed, and yet he may not be true and first inventor; he may have borrowed it from some other person . . . 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.’

*Rival Inventors.*—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 since Dr. Hall had confined it to his closet, and had not communicated it to the public, it was held (1766) that Dollond was to be considered the first and true inventor as required by the statute. The case was not reported, and our knowledge of it is derived from the mention made of it in the case of *Boulton v. Bull* (2 H. Bl: 469). Dollond’s case was followed by numerous others, the result of which may be thus stated:—If two persons make the same invention about

<sup>1</sup> It must be kept in mind that the word ‘patentee’ in this section signifies, in the case of a patent granted to several persons jointly under the Act of 1883, only the person who claimed to be the inventor of the subject-matter of the patent, and does not include other non-inventors who may have joined him in obtaining the grant.

Moreover, it will be shown hereafter that the importer of an invention from abroad is held by the courts of law to fall within the meaning of the words ‘true and first inventor.’

the same time independently of each other, he who first obtains a patent has an exclusive right to the invention (*Forsyth v. Riviere*, Chit. Prerog. Cr. 182); 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, provided that there was not such a use of the invention previously to the patent as amounted to what is technically called 'public use.'

In *Lewis v. Marling* (1 W. P. C. 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* (1 W. P. C. 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.'

*Joint Inventors.*—It may happen that a given invention results from the combined operation of two or more minds, in which case it is necessary that all the inventors should apply for the patent. 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.

*Assistants and Workmen.*—It must, however, be taken to be undoubted law, that the suggestions and aid 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 improve it;

and after obtaining 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* (1 W. P. C. 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 than that he should have taken out the patent, and still 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 invention 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.' See also *Bloxam v. Elsee* (6 B. & C. 169), *Minter v. Mower* (1 W. P. C. 138), and *Barber v. Harris* (Holroyd, 60), which show that a man may direct other persons to do certain things and yet be the true inventor.

In *Allen v. Rawson* (1 C. B. 551), a case where the validity of a patent was contested on the ground that parts of the invention owed their origin to two workmen, it was held that more convenient modes of carrying out the main principle of an invention and subordinate improvements

suggested by persons in the employment of the patentee may be safely adopted by him and embodied in his specification. 'I take the law to be' (said *Mr. Justice Erle*, before whom the action for an infringement was tried) 'that if a person has discovered an improved principle and employs engineers, agents or other persons to assist him in carrying out that principle, and they in the course of experiments arising from that employment make valuable discoveries accessory to the main principle, and tending to carry that out in a better manner, such improvements are the property of the inventor of the original improved principle, and may be embodied in his patent; and if so embodied the patent is not avoided by evidence that the agent or servant made the suggestions of the subordinate improvement of the primary and improved principle.' When a new trial was moved for, on the ground that the judge had misdirected the jury, it was refused. On that occasion *C. J. Tindal* said, 'It would be difficult to define how far the suggestions of a workman employed in the construction of a machine are to be considered as distinct inventions by him, so as to avoid a patent incorporating them taken out by his employer. Each case must depend upon its own merits. But when we see that the principle and object of 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, should render the patent void.'

A firm of manufacturing chemists employed E., a scientific chemist, in their laboratory as analyst and experimentalist. The manufacture of alum free from impurities being a desirable object, it occurred to E. to try experiments with peroxide of manganese for that purpose, and he was thereupon instructed by the firm to make the suggested experiments. This he did with the assistance of one member of the firm, and whilst having communications with the other. The experiments succeeded, and a patent was obtained for the discovery by the firm in their own names. The judge,



at the trial of an action where the validity of the patent came in question, held that they were justified in applying for the patent. Although many stages of the discovery may have been due to E., yet he was the agent of his employers. His labours were theirs, he worked in their laboratory and with their materials as well as with their assistance, and the benefit of the discovery belonged to them. (*Kurtz v. Spence*, 5 R. P. C. 180.)

But where the patentee has no closer connection with the invention than that of being simply the employer of the inventor, he will not be able to sustain his patent. 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 true and first inventor fell to the ground. (*Rex v. Arkwright*, 1 W. P. C. 64.) Again, in the case of *Barker v. Shaw* (1 W. P. C. 126 n.), 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 true and first inventor, since the source of the invention could be traced elsewhere. Whenever this can be done (with the exceptions stated in the note on page 29) the patent is invalid. 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.)

PRIOR PUBLIC USER.

One of the first cases which the books contain was decided in 1798. Tennant brought an action for the infringement of his patent 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 previously 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 previous user was held to render the patent invalid (1 W. P. C. 125).

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, however, was never finished. 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.

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 in the case of *Losh v. Hague* (1 W. P. C. 202) that the invention was not new, inasmuch as one Paton had, previously to the date of Losh's patent, and under a patent of his own, described a mode of constructing wheels of wrought iron, which 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 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 were 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, *Horsefall*, says that he remembers, nearly twenty-eight years

ago, 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 charging the jury assembled to try the action of *Cornish v. Keene* (1 W. P. C. 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 anyone 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 these 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.'

The case of *Carpenter v. Smith* (1 W. P. C. 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. . . . 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 directed to be made and put on his gate 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,<sup>1</sup> in a public manner, any man having access to it, how can he be said to be the inventor, if by merely gaining access to that he takes out a patent? A man cannot be said to be the inventor of that which has been exposed to public view, and which he might have had access to if he had thought fit. . . . 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

<sup>1</sup> 'If a person' (asked *Dallas, J., Hill v. Thompson*, 1. W. P. C. 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* (1 W. P. C. 511), observed that 'if the defendants had shown that 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.'

to a public user in this way:—Twenty-six years ago Freer produced to Tilsley 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, I cannot but think that that would be a destruction of the novelty of the plaintiff’s invention. 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.’

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 inventor, as contradistinguished from the use of it by himself in his chamber.’

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 that, some time before the date of the patent, the carriage-way of a 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, 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.)

A patent for an improved anchor was granted in 1838 to one Porter. On the trial of an action, brought by Porter's assignee, for an infringement, it was shown that in 1826 an anchor-smith had invented an anchor similar to Porter's, and had sold a few of that make to various shipowners for use in their ships. This was held such a public user as sufficed to invalidate the patent. (*Honiball v. Bloomer*, 2 W. P. C. 199.)

*Hancock v. Somervell* (reported in Newton's L. J., vol. xxxix. p. 158) is a case in which peculiar circumstances tending to show public user were adduced in evidence for the purpose of rebutting the claim to novelty, and it raised the interesting question whether publication in this country of an *article* made abroad, there having been no disclosure of the secret of making it, is equivalent to a publication of the *invention*, so as to render void a patent afterwards obtained in this country by another inventor for a similar invention. 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 analysed, 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 that previously 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 anyone 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, and thus the foreign inventor lost the benefit of a very valuable invention by not taking the precaution to obtain a patent in this country before opening negotiations for the sale of the manufactured article.

On the trial of *Muntz v. Foster* (2 W. P. C. 103–108), *Tindal, C. J.*, said to the jury, '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 producing a better sheathing (for the bottom of ships) by reason and by means of its oxidating 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. And 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, and 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. . . . In my judgment it will not go far enough [to show that sheets of this particular alloy had been previously made], 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 question of public user arose in the case of *Heath v. Smith* (2 W. P. C. 268). An action for the infringement of a patent under which the invention claimed was an improved method of making cast steel, by fusing carburet of manganese along with common iron or steel. 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.

Where the defendants at the trial of an action for the infringement of a patent for a method of manufacturing penholders proved that they had made penholders according to the method which the plaintiff afterwards patented, and that such penholders had been placed in their warehouse for sale, though no sale was proved, *Sir J. Jervis, C. J.*, the presiding judge, held that the plaintiff's invention was destitute of novelty. (*Mullins v. Hart*, 3 Car. & K. 297.)

The sale in England of articles made abroad is an anticipation of a subsequently patented invention. (*Jensen v. Smith*, 2 R. P. C. 249.)

The following later cases on the subject of prior user may be referred to: *Croysdale v. Fisher*, 1 R. P. C. 17; *Brereton v. Richardson*, 1 R. P. C. 165; *Lister v. Norton*, 3 R. P. C. 199; *Podmore v. Wright*, 5 R. P. C. 380.

It was decided by *V. C. Bacon* in the case of *Rolls v. Isaacs* (L. R. 19 Ch. D. 268) that the prior user of an invention in a colony does not affect the validity of a patent subsequently obtained for the same invention in the United Kingdom.

But, in order to break down the patent of the person who was *de facto* the first to produce a useful article by the

patented process, the fact of anticipation, if that is relied on, must be very clearly made out. (*Von Heyden v. Neustadt*, 50 L. J. N. S. Ch. 126.)

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. (*The Houshill Co. v. Neilson*, 1 W. P. C. 709, in the *House of Lords*. And see the remarks of Sir W. P. Wood, V. C., on *Jones v. Pearce* in *Tangye v. Stott*, 14 W. R. 386, as well as the case of *King, Brown & Co. v. Anglo-American Brush Corporation*, 6 R. P. C. 414.) Their lordships, however, in delivering judgment in the first of these cases, expressly left it an open question whether a patent for an invention would or would not stand, if a similar invention had formerly been in use but had ceased to be used long before the date of the patent, and the thing had been completely lost sight of until discovered again and patented.

*Secret User*, from which the inventor derives a profit, and being not merely a user by way of experiment, will certainly deprive his after-acquired patent of its validity. But there is still the question whether prior secret user by someone other than the patentee is sufficient to vitiate a patent. This point has never been judicially decided in an English court; but we have a dictum of Mr. Justice Ebb, 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.' Tennant's case (*ante*, p. 33) may be referred to, as well as Lord Abinger's remark in *Carpenter v. Smith* (*ante*, p. 37) and the note on page 38.

*Fraud*.—By the thirty-fifth section of the Patents Act of 1883 it is enacted that a patent granted to the true and first inventor shall not be invalidated by an application in fraud of him, or by provisional protection obtained thereon,

or by any use or publication of the invention subsequent to that fraudulent application during the period of provisional protection.

*Abandoned Experiments of other Persons.*—A patent is not invalidated by the fact that persons other than the patentee had previously made experiments in the direction of the invention, if such experiments did not result in the utilization 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.

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 difference in the evidence will establish either the one proposition or the other. (*Cornish v. Keene*, 1. W. P. C. 519.)

In *Galloway v. Bleadon* (1 W. P. C. 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 which has been laid out for him by the preceding inventor, from availing himself of it and having the benefit of it. . . . 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* (1 W. P. C. 508).

In *Jones v. Pearce* (1 W. P. C. 124), an action brought for an infringement of a patent for an improved construction of carriage-wheels, the defendants contended that wheels similar in principle to those for which the patent had been obtained had been invented several years previously by a Mr. Strutt, made under his orders, and used in a cart employed 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 'you are of opinion that Mr. Strutt's wheel 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.'

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 previously 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*, 1 W. P. C. 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.'

In the case of *Tungye v. Stott* (W. N. 1866, p. 68), it appeared that the plaintiff was the assignee of a patent obtained for improvements in pulley-blocks, and that previous to the patent there had been described in a book a pulley similar in principle to that patented, from which description one Moore had made a pulley. This he had tried a few times and then laid aside. The defendant had also made a pulley from the description in the book. It was held, however, that although the principle had been made known, the facts above mentioned were of the nature of experiments, and that as the patentee was the first to carry the invention fully into effect his patent was good.

In *Hills v. London Gas Light Co.* (5 H. & N. 312) it appeared that Mr. 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.'

Other cases bearing upon the question of prior experimental user are *Brereton v. Richardson* (1 R. P. C. 165); *Moseley v. Victoria Rubber Co.* (4 R. P. C. 253); *Morgan v. Windover* (4 R. P. C. 417); *S. C. on Appeal* (5 R. P. C. 295); and in H. of L., 7 R. P. C. 130; *Edison and Swan Co. v. Holland*, Court of Appeal (6 R. P. C. 277, 283); *Winby v. Manchester, &c., Tramways Co.* (6 R. P. C. 359).

*Prior Imperfect Machines.*—The fact that there had previously been made a machine which turned out a failure will not invalidate the right of a patentee who has made a successful machine with the same object, although there may be a certain degree of similarity between some of the details of the two machines (*Murray v. Clayton*, 7 L. R. Ch. 570). And in *Barlow v. Baylis* (1 Griff. P. C. 44), where a machine, alleged to be an anticipation of a patented machine, was shown to have been so imperfect as to be incapable of doing the promised work 'more or less badly,' it was held not to have deprived the later machine of the attribute of novelty.

*Earlier Inventions having a similar object.*—It is sometimes argued that a patentee is not to be deemed the true and first inventor, if a patent for a similar object had been previously obtained by another inventor; but this contention will not prevail when it can be shown that the earlier patentee had not secured the principle, and that the means by which the object is attempted to be accomplished are substantially different in the two cases.

Kneller obtained a patent for an apparatus for the

evaporation of liquids and solutions at a low temperature. The apparatus consisted of pipes or tubes, along which air was forced nearly to the bottom of the vessel containing the liquid to be evaporated, which air, passing through small holes in the submerged tubes, traversed the liquid and carried off the aqueous particles. The invalidity of this patent was attempted to be proved by showing that an invention having a similar object in view had been previously patented. But when it appeared that the earlier invention consisted in propelling a quantity of heated air into the lower part of the vessel containing the liquid, and causing such air to pass through the liquid in streams, by means of a perforated coil of pipe or colander, the jury found that, although the principle of both inventions consisted in forcing air in finely divided streams through a fluid, for the purpose of facilitating evaporation, yet the modes by which this was effected in the two cases were sufficiently distinct to acquit the latter invention of being a piracy of the former; and that the latter patent was not invalidated by reason of want of novelty in the invention. The Court was of the same opinion, upon the application for a rule to set this verdict aside. (*Hullett v. Hague*, 1 Carp. Rep. 501; 2 B. and A. 370.)

In *Minter v. Mower* (1 W. P. C. 140) it appeared that the plaintiff had taken out a patent for an improvement in reclining chairs, which consisted in the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acted as a counterbalance to the pressure against the back. Mower, the defendant, made chairs in imitation of Minter's chair, and contended, in an action for an infringement of the patent, that the plaintiff was not the first and true inventor, alleging that one Brown had, previously 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 encumbered 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 encumbering 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, something that will produce an effect, which I think a very beneficial one.'

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. *Mr. Justice Buller*, in *Rex v. Arkwright* (1 W. P. C. 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.' 'Although' (said *Tindal, C. J.*, in *Cornish v. Keene*, 1 W. P. C. 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 the course of the argument of the case of *The House-hill Company v. Neilson* (1 W. P. C. 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.'

If the foreign book containing a description of an invention has been circulated in England (*Reg. v. Steiner*, Newton's Lond. Jour. vol. xl. p. 71), or even if only four copies of the foreign book are sent over to a bookseller in this country and by him exposed for sale, only one being actually sold to a public library (*Lang v. Gisborne*, 31 Beav. 133), a patent subsequently obtained by an independent inventor is invalid.

However, where the book relied upon as evidence of a disclosure before the date of his patent of the patentee's invention, a skate, was an American book containing a copy of a drawing of the skate attached to the patentee's American patent, and which book had been received by a librarian of the Patent Office Library in London about thirty-seven days before the date of the English patent without being entered either in the list of donations or in the catalogue of the library, and nothing more was known of it until another librarian found it many months afterwards on a shelf in a corridor leading to the public room, which corridor was open to the public, all this was held by *Sir G. Jessel, M. R.*, and afterwards by the Court of Appeal, not to prove a publication sufficient to invalidate the patent. (*Plimpton v. Spiller*, L. R. 6 Ch. D. 412.)

In the case of *Otto v. Steel* (31 Ch. D. 241, and 3 R. P. C. 112) *Mr. Justice Pearson* held that the simple fact that a copy of a French book was in the inner library of the British Museum was not sufficient publication to lead to the inference that whatever was found in that book had become part of the public stock of common knowledge.

Two specifications in the German language of German patents, with drawings, were deposited in the Library of the Patent Office, London, the one more than two years, the other forty days, before the date of a British patent, and

entries of these specifications were published in the official Patents Journal and their subject-matter stated, a footnote being appended to the effect that the specifications might be seen in the Library. It was held that this amounted to a publication of the inventions in this country. (*Harris v. Rothwell*, 31 Ch. D. 416; S. C. 3 R. P. C. 383; 4 R. P. C. 225.)

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 communicated to the world by a book, it is not necessary to show that the patentee derived his knowledge of the invention from such 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 true and first 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 rule must depend upon the particular circumstances of each case. The existence of a single copy of the work in a depository where it had 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. (See also *Plimpton v. Malcolmson*, L. R. 3 Ch. D. 531; *Plimpton v. Spiller*, L. R. 6 Ch. D. 412; *Von Heyden v. Neustadt*, 50 L. J. N. S. Ch. 126; *United Telephone Co. v. Harrison*, L. R. 21 Ch. D. 721.)

If a published drawing of a machine is sufficient of itself to enable a mechanist to construct the machine, that would be enough to invalidate a subsequent patent for a similar machine. (Per Lord Esher, M. R., in *Herrburger v. Squire*, on Appeal, 6 R. P. C. 198.)

## 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.<sup>1</sup> 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*, 1 W. P. C. 86; and see *Jones v. Berger*, 1 W. P. C. 550.)

In the case of *Macnamara v. Hulse* (2 W. P. C. 128), an action for the infringement of a 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 the circumstances, the plaintiff's invention was destitute of novelty. The plaintiff asserted that the defendant had infringed his patent by

<sup>1</sup> The operation of this Rule is now narrowed by Art. 4 of the International Convention, and by Sect. 103 of the Patents Act, 1883. Any person who has duly registered an application for a patent in any of the States of the Union enjoys a right of priority to a British patent for a period of seven months from the date of his foreign application, although the invention may have been meanwhile published or used in this country.

cutting his block into two. 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 if he established that, it followed that his own and the defendant's were likewise distinct, in which case there was no infringement.

Even the specification under a worthless patent might sufficiently disclose the invention so as to anticipate a subsequent patent. (Per Lord Halsbury, C., in *Kaye v. Chubb*, 5 R. P. C. 648.)

But if the prior inventor had 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. In the case of *Betts v. Menzies* (10 H. L. C. 117) 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 a subsequent patent involving a practical invention unless the antecedent publication contains the same amount of practical and useful information. Betts's patent was for the production of a material capable of application to many useful purposes by combining thin sheets 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 sheets 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's 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.

Under a patent for the purification of gas, Mr. Croll

claimed the use of oxides of iron, which expression was held to mean both hydrated and anhydrous oxides of iron. Mr. 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 Company*, 5 H. and N. 312.)

If a specification contains a general statement which gives no clear intimation either by its own construction or in the opinion of a workman of ordinary skill, either as to the result or as to the means, and if a person should out of the general words which describe nothing discover something not inconsistent with them but not disclosed by them, he may obtain a patent for his discovery. But if in a specification one of the modes described in it gives a clear result by clear means, although the person who took out the patent does not see that result, and another person by studying the specification more carefully perceives the result, he has no right to take out a patent for it. (Per Lord Esher, *M. R.*, in *Kaye v. Chubb*, 4 R. P. C. 298.)

The antecedent description of an invention which will have the effect of depriving a subsequently patented invention of the attribute of novelty, must (according to Lord Westbury, *C.*, in *Hills v. Evans*, 4 De G. F. & J. 288) '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 the necessity of making further experiments and gaining further information, before the invention can be made useful. If something 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 invention 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 and accurate, and gives a specific rule of practical application. . . . Upon principle, therefore, I conclude that the prior knowledge of an invention to avoid a patent must be a knowledge equal to that required to be given by a patent, viz. such a knowledge as will enable the public to perceive the very discovery, and to carry the invention into practical use.'

According to *L. J. Brett*, in *Otto v. Linford* (Court of Appeal, 46 L. T. n. s. 39), the question to be considered is whether the prior specification, fairly read by a person conversant with such matters, would give a reasonably clear description of the later invention—that is, supposing it to relate to a machine, whether it would give a reasonably clear description of a machine that would effect what the machine of the later inventor effects. (See also *Von Heyden v. Neustadt*, 50 L. J. n. s. 126; *Moseley v. Victoria Rubber Co.*, 4 R. P. C. 252; *Bray v. Gardner*, 4 R. P. C. 400; *Haslam v. Hall*, 5 R. P. C. 19; *American Braided Wire Co. v. Thomson*, 5 R. P. C. 122.)

'Even if there is identity of language in two specifications' (said *Lord Westbury*, in *Betts v. Menzies*, 10 H. L. C. 152), '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 pre-

cisely 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.'

Where a provisional specification contained an incomplete description of a piece of mechanism which was omitted from the complete specification, and another patent was afterwards obtained for similar mechanism, the passage in the preceding patent was held not to be a prior publication so as to vitiate the second patent, because the description was not sufficient to enable a workman to make the object. (*Stoner v. Todd*, L. R. 4 Ch. D. 58.)

#### PRIOR PUBLICATION BY INVENTOR.

We now come to a series of cases which declare the law with regard to a publication of the patented invention before the date of the patent—not by persons other than the patentee, but by the patentee himself. A person may be the true and first inventor of that for which he has obtained a patent, and yet he may have disintitiled himself to the benefit of it by prior dealings with or prior publication of the invention. The law says that a man may not first publish his discovery and then obtain protection for it against the public, whom he has already made acquainted with it. Having done that, he has no longer anything to give as a consideration for the grant.

Some of the cases will show inventors who intend to protect their inventions that they should be extremely cautious how they deal with them before applying for patents.

An inventor does not lose his right to a patent by keeping his invention to himself after its completion, provided there is no profitable user of it (*Bentley v. Fleming*, 1 C. & K. 587). But it may be remarked that, although not destructive of his right, delay is here especially dangerous, and the fact might, under certain circumstances, be used as a strong argument against a patentee.

In the same case of *Bentley v. Fleming* it was held that an inventor might safely deposit a machine of his invention,

for a reasonable time, in a room open to the public, for the purpose of having its properties tested.

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. (See also *Lewis v. Marling*, 4 C. & P. 57; and *Moss v. Malings*, 3 R. P. C. 378.)

Where the article had been manufactured for sale, and offered for sale, although not sold, this was held to be such a user of the invention as rendered a subsequently obtained patent bad. (*Oxley v. Holden*, 8 C. B. n. s. 666.)

Where delay occurred in the issue of a patent without the patentee's fault, the manufacture by him of articles before the date of the patent for the purpose of being sold after the date was held not to render the patent invalid. (*Betts v. Menzies*, 4 Jur. n. s. 477.)

In *Wood v. Zimmer* (Holt, N. P. C. 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 July 1875 a patent was granted to Thomas Muir for improvements in the manufacture of meal and flour. On the trial of an action for the infringement of this patent the patentee himself proved that in June 1875 he had made flour according to the patented process and had sold it in the ordinary way of business. The action was thereupon dismissed. (*Germ Milling Co. v. Robinson*, 3 R. P. C. 253, and see *Re Adamson's Patent*, 6 De G. M. & G. 420.)

Patterson, one of the three gas referees appointed by the Board of Trade under the City of London Gas Act of 1868, procured a patent for an improved mode of purifying coal gas on March 9, 1872. He had obtained a knowledge of the patented process in the course of his labours as

referee, and it appeared that it had been described by the three referees, including Patterson, in an official report, which, though dated January 31, 1872, and printed about that time, was kept back from the authorities to whom it ought to have been presented as soon as printed, until March 26. A suit for an infringement of the patent having been decided in Patterson's favour, the case went before the Court of Appeal (*Patterson v. Gas Light and Coke Company*, L. R. 2 Ch. D. 812), and then to the House of Lords (L. R. 3 App. Cas. 239), where it was held that the knowledge obtained in the discharge of his duty by one referee, and by him communicated to his colleagues, became at once public property, and could not be treated by them as confidential, nor could one of their number take out a patent for it.

It was contended in *Thomson v. Batty* (6 R. P. C. 84) that because the patentee of an invention relating to improvements in the mariner's compass had previously published a mathematical paper discussing the objects to be aimed at, the difficulties to be overcome, and the conditions to be satisfied in all attempts to improve the compass, he had disclosed his invention to the public and was not afterwards entitled to a patent. But the judge at the trial of an action for infringement held that what the patentee had done was very far from disclosing how the principles enunciated in the paper were to be realised in an improved instrument, and that as he had shown this by his specification after much thought and many experiments, he was entitled to a patent for his very useful invention.

*Confidential Communications.*—If, however, the inventor communicates his discovery to a few persons under the bond or seal of confidence, there is no publication. In *Morgan v. Seward* (1 W. P. C. 194), an action which arose out of Galloway's patent for an improved method of constructing paddle-wheels, it was given in evidence that before the date of the patent, Curtis, an English engineer, made for Morgan, the managing director of the Venice and Trieste Company, two pairs of wheels upon the principle mentioned in the

specification. Galloway, the patentee, gave instructions to Curtis under an injunction of secrecy, because he was about to take out a patent. The wheels when completed at Curtis's factory were not shown or exposed to the view of those who might happen to come there. After remaining a short time they were sent to Venice in April 1829. Curtis deposed that they were sold to the company, without saying by whom, and Morgan paid Curtis for them. Galloway obtained a patent on July 22, 1829, and it was assigned by him to Morgan. Upon these facts it was contended 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. . . . 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*. . . . 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.’ And see the remarks of *L. J. Fry* in *Humpherson v. Syer* (4 R. P. C. 414; also the case of *The Useful Patents Co. v. Rylands* (2 R. P. C. 262).

*Experiments by the Patentee.*—It has been decided that when the disclosure of the secret took place during the course of experiments made by the patentee with the view of testing or improving the invention (such disclosure being unavoidable and not more than was necessary for the purpose), this will not take away the inventor’s right to a patent.

Before applying for a patent the inventor of a machine entrusted it to a person for the purpose of trying experiments, and it was held that he had not thereby made it public. (*Bentley v. Fleming*, 1 Car. & K. 578.)

Shortly before an application was made for improvements in constructing and stopping bottles, 600 dozen of bottles made by the inventor according to the specification under the patent subsequently obtained were sent to a person as samples. It was held by *Mr. Justice Chitty* that they were sent out by way of experiment, and

that the fact did not render the patent invalid. (*The Useful Patents Co. v. Rylands*, 2 R. P. C. 262.)

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 four months before he applied for a patent. It was held that there had been public user, and not merely experiments inasmuch as he had derived a profit from the employment of the invention after its utility had been ascertained, and during all that time the public had free access to it. (*Re Adamson's Patent*, 6 De G. M. & G. 420.)

A series of experiments performed in the presence of others may however be not only successful, but also actually of pecuniary benefit to the inventor, and yet it will not necessarily be held that he has given the invention to the world. That the coincidence of actual immediate profit with the carrying on of experiments is not of itself sufficient to render a subsequently obtained patent void was decided in the case of *Newall v. Elliott* (4 C. B. N. s. 269), where it appeared that the inventor of a machine for paying out telegraph wire had not procured a patent until after he had laid down a cable in deep sea by means of the machine. Experiments on dry land had been indecisive; an opportunity for making decisive experiments was presented in the course of executing a Government contract for laying down a cable at sea. Such experiments were made, and the Court held that they did not amount to a gift of the invention to the world.

#### PRIOR PUBLICATION BY OTHER PERSONS.

The two following cases will show that prior publication of the invention by persons other than the patentee may take place without reference to public user, or publication in a book, or specification. Saxby obtained a patent in 1874 for improvements in signalling apparatus on railways. The invention comprised a combination of two old contrivances having the same object in view. To show prior publication the following facts were proved. The particular improvement in question had been previously suggested to the mind of a

Mr. Edwards, who was in the employment of the London and North-Western Railway Company, and who, by merely placing the two old contrivances side by side, had made working drawings, which it was admitted showed a combination substantially the same as Saxby's subsequently patented modification. Two sets of tracings were made from the drawings in Edwards's office, where four or five draughtsmen were kept, and they were afterwards sent to the offices of the L. & N. W. R. Company at Crewe, where there were seventeen or eighteen draughtsmen. The general public visited these offices, and there was evidence that the drawings or tracings had there been seen by an engineer who was not in any way connected with the railway company. No secrecy or concealment was imposed or observed in regard to the drawings and tracings with reference either to the draughtsmen in these two offices or to members of the general public who might happen to visit them. Further, the particular combination had been explained by Edwards to a person in Saxby's employment, and rough sketches of the drawing were left with him. The drawings and tracings were laid before the chief engineer of the railway company, and they were submitted to their locomotive committee. Besides all this a working apparatus was made from the drawings by a person in the employment of the company, and this was placed in the pattern-shop, where it was subjected to trial. All this occurred before the end of the year 1873. It was held by a Divisional Court, by the Court of Appeal, and by the House of Lords, that these facts amounted to evidence of a publication of the invention, that such a disclosure of it had been made as placed it within reach of the public, and therefore that Saxby's patent was invalid. (*Saxby v. Gloucester Waggon Co.*, 2 Griffin P. C. 54.)

The defendant applied for a patent in respect of a waste water preventer in January 1885, but did not proceed with his application. In the next month the plaintiff applied for a patent in respect of what was substantially the same invention, and in due course a patent



was granted to him. An action for infringement having been brought it was proved that before the date of the patent the defendant had openly exhibited in his shop to at least two persons, without any injunction of secrecy, the apparatus described by him in his provisional specification. It was held by the Court of Appeal that there had been publication of the invention, and that the patent was invalid. (*Humpherson v. Syer*, 4 R. P. C. 407.) In this case *L. J. Fry* framed the enquiry in this form: Is it the fair conclusion from the evidence that some English people, under no obligation to secrecy arising from confidence or good faith towards the patentee, knew of the invention at the date of the patent?

#### PUBLIC EXHIBITIONS.

If an inventor desires to exhibit at an industrial or international exhibition an invention which he has not yet patented, but for which he intends to obtain a patent, he should proceed under the 39th section of the Act of 1883, Rule 15 of the Patents Rules, 1890, and the 3rd section of the Act of 1886. The 39th section enacts that (a) the exhibition of an invention at an industrial or international exhibition certified as such by the Board of Trade, or (b) the publication of any description of the invention during the period of the holding of the exhibition, or (c) the use of the invention for the purpose of the exhibition in the place where the exhibition is held, or (d) the use of the invention during the period of the holding of the exhibition by any person elsewhere, without the privity or consent of the inventor, shall not prejudice the right of the inventor, or his legal personal representative, to apply for and obtain provisional protection and a patent in respect of the invention or the validity of any patent granted on the application. But the exhibitor must, before exhibiting the invention, give the Comptroller the notice prescribed by Rule 15 of his intention so to do; and the application for a patent must be made before or within six months from the date of the opening of the exhibition. The inventor must also furnish to the Comp-

troller a brief description of the invention with drawings if necessary, and such other information as the Comptroller may require. The notice must bear a stamp of 10s. (See Form O, *post*, p. 402.)

By the 3rd section of the amending Act of 1886 it was enacted that it should be lawful for the Queen, by Order in Council, from time to time to declare that section 39 of the Patents Act of 1883 shall apply to any exhibition (held out of the United Kingdom) mentioned in the Order in like manner as if it were an industrial or international exhibition certified by the Board of Trade, and to provide that the exhibitor shall be relieved from the conditions, specified in the said section, of giving notice to the Comptroller of his intention to exhibit, and shall be so relieved either absolutely or upon such terms and conditions as to Her Majesty in Council may seem fit.

## CHAPTER V.

AMOUNT OF INVENTION REQUIRED TO SUPPORT A PATENT—  
PATENTS FOR 'APPLICATIONS.'

THESE subjects are closely connected with that of Novelty, but it will be more convenient to separate the cases and treat of them in a distinct chapter. 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.

'If a patentee would succeed it is necessary for him to show not merely newness in the sense of doing a thing which has not been done before, but he must show newness in the shape of novelty by producing a thing which requires some exertion of mind that could properly be called invention.' (Per *Mr. Justice Willes* in *Tatham v. Dania*, 1 Griff. P. C. 213. And see what fell from *L. J. Cotton* and the other LL.JJ. in *American Braided Wire Co. v. Thomson*, 5 R. P. C. 123; *Britain v. Hirsch*, 5 R. P. C. 232; and *Cole v. Saqui*, 6 R. P. C. 41.)

A person having obtained a patent for adapting an iron plate to the heel of a boot similar to what had been previously adapted to the toe, brought an action for an infringement. In the Court of Appeal *L. J. Cotton* said: 'In my opinion a thing is not to be called new in the sense of *Crane v. Price*, simply because that particular thing has never been seen before. To be new in a patent sense it is necessary that the novelty must show invention, and it is

not sufficient to be new in the patent sense for the patentee to be the true and first inventor, if it is merely using that which has been used for an analogous purpose before the date of the patent.' (*Blakey v. Latham*, 6 R. P. C. 187.)

It is impossible, however, 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.

The question whether that which is claimed as an improvement of an existing machine was the result of a sufficient amount of invention often raises one of the most difficult points of patent law. 'There are many cases in which the moment you see the specification or improvement you can say without any evidence at all, "This is a most remarkable, elaborate, and difficult thing to do; it must have required great invention, and there can be no dispute about it," and no dispute is ever raised. On the other hand, there are some things so clear, so simple, and so obvious, that a person having any decent amount of mechanical knowledge says at once it is so easy that it requires no invention at all; it is a mere mechanical equivalent, or that sort of thing, that any ordinary workman can do without any difficulty. Then there are a great number of cases between, where the improvement is no doubt small, but it may require a considerable amount of invention to effect it.' Per *Sir G. Jessel, M. R.*, in *Saxby v. The Gloucester Waggon Company* (Court of Appeal shorthand writer's notes; see an abridged report in 2 Griff. P. C. 54).

‘ In point of law ’ (said *L. C. J. Tindal*, in *Crane v. Price*, 1 W. P. C. 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 of some sudden and lucky thought, or mere accidental discovery.’ In either of the two last cases, the practical realisation of a good idea will 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 was trifling. The case of water-tabbies, so often mentioned in courts of law, is a case in point. The invention (according to *Mr. Justice Buller* in *Boulton v. Bull*, 2 H. Bl. 463, 1 Carp. 117) first owed its rise to the accident of a man 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 mandrel, 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*, 1 W. P. C. 467) ; ‘ 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.’ Here the great utility of the invention came in aid of the apparent smallness of the step, and the patent was sustained.

Lace made from cotton thread 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 mitts 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*, 1 W. P. C. 100.)

The case of *Lewis v. Davis* (1 W. P. C. 488) is often 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 Lord 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.'

In the case of *Hinks v. Safety Lighting Company* (L. R. 4 Ch. D. 607), Sir G. Jessel, M. R., held that the substitution of a flat wick for a solid round wick in a lamp was a sufficient ground for a patent; because, notwithstanding the apparent smallness of the invention, it had the effect of largely increasing the illuminating power of the lamp; in other words, it was a very useful invention. In giving judgment in the plaintiff's favour the learned judge made the following remark:—'Where a slight alteration in a combination turns that which was practically useless before into that which is very useful and very important, judges have considered that though the invention was small, yet the result was so great as fairly to be the subject of a patent; and as far as a rough test goes, I know of no better.' (See also *Frearson v. Loe*, L. R. 9 Ch. D. 48.)

The specification under E. L. Hayward's patent for improvements in pavement lights, described a combination of three things, viz. a frame, a flange, and a piece of glass moulded below into a particular form of prism; the object being, when the apparatus was inserted in a floor or pavement, to throw light coming from above into a room or

space beneath, in a lateral direction. Now these three things taken separately were old. However, the Court of Appeal held, affirming the decision of the divisional court, that although a glass prism of another form had been employed in the decks of ships for the purpose of admitting light in a manner resembling, to a certain extent, the plan adopted by Hayward, this was a novel combination of old parts with a useful result; and farther, that the combination displayed a sufficient amount of invention to support the patent. The Lords Justices were of opinion that Hayward was an inventor, since he had found out something new, and had made a useful article that had not been made before. 'If it is not an invention' (said *L. J. Bramwell*), 'it is very strange that it has never been done before. . . . It is not the less an invention because it required but small inventive powers to enable the patentee to do it.' (*Hayward v. Hamilton*, 1 Griff. P. C. 115.)

In *Reynolds v. Amos* (3 R. P. C. 215), *V. C. Bacon* held that the application of chains in compressing and storing ensilage was a patentable invention; but this must be considered an extreme case.

In the case of *The Edison & Swan Electric Light Co. v. Woodhouse* (4 R. P. C. 79), an action for the infringement of an electric lamp, one of the main questions in dispute was whether Edison's carbon *filament* had been anticipated by the previous employment by Swan of a carbon *rod*. It was held in the Court of Appeal by two judges against one that the disuse of Swan's lamp showed that it had not been successful, whilst Edison's lamp had been accepted by the public, and that the difference between a carbon rod and a carbon filament was the difference between failure and success. It might be that a patent for the filament alone could not be sustained, but when the filament was part of a combination which was useful and took the place of a rod in a combination that was useless, there was no reason why the new useful combination might not be the subject of a good patent.

The preceding cases may be compared with a series,

which we will now cite, where the inventions were adjudged insufficient to support patents.

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. The real improvement was in the avoidance of welding, and this was done by well-known means. 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. Here formerly three pieces were united together; Brunton only unites two; and if the union 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 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), it appeared that Kay had procured a patent for 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; and also for improved machinery for spinning the same after having been so prepared. It appeared that the improvement in the spinning machinery was nothing more than the placing of certain portions of a well-known machine within two inches and a half of each other, instead of at a greater distance. It was shown that the dis-



tances 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 C. P. that the adoption of a particular distance did not, under these circumstances, 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.

To adjust in a more beneficial manner than before the distance between two of the working parts in check-action pianos was held not to be good subject-matter for a patent. (*Herrburger v. Squire*, 5 R. P. C. 581; affirmed on app. 6 R. P. C. 194.)

In the case of *Tatham v. Dania* (1 Griff. P. C. 213), it was held by the judge who tried the action that the use of sets of rollers in a series going at different rates of speed for the purpose of making fibrous or textile materials pass through in a form more convenient and advantageous for being operated upon by the succeeding part of the machine was not the proper subject of a patent when it was shown

that a similar contrivance had been employed previously in cotton spinning.

In *Parkes v. Stevens* (L. R. 8 Eq. 358), *James, V. C.*, was of opinion that the substitution of a slide for a hinge in the door of a lamp could not be the foundation of a valid patent. And in the same case (affirmed L. R. 5 Ch. D. 86) it was held that the application of a sliding door to a *spherical* lamp was not patentable, as it was proved that sliding doors had been previously fitted to *cylindrical* lamps.

When it was shown that there existed a previous patent for preserving meat already salted, dried, or smoked, by dipping it into a solution of bisulphide of lime, it was held that an invention, the object of which was to preserve *fresh* meat by dipping it into a like solution, was not patentable. (*Bailey v. Robertson*, L. R. 3 App. Ca. 1079.)

In the case of *Saxby v. The Gloucester Waggon Company* (L. R. 7 Q. B. D. 305), it was decided by the House of Lords that a combination of an old locking apparatus with an old actuating apparatus for working railway signals and points did not display a sufficient amount of invention to support a patent, it having been proved that the combination was effected by obvious means and in a way that did not call for more than ordinary mechanical skill. (See also *Williams v. Nye*, 7 R. P. C. 37, 62.)

Notwithstanding proof of practical usefulness and of a large sale, it was held by the Court of Appeal that the making of the handles of bats used in lawn tennis and other games with two opposite grooves and with an enlarged end was not good subject-matter for a patent. (*Slazenger v. Feltham*, 6 R. P. C. 232.)

The discovery that a particular advantage may be obtained by using a known machine in a known manner is not a patentable invention. (*Tetley v. Easton*, 2 C. B. N. S. 706.)

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 speeds of the roller and bowls were different. In *embossing*, the roller had a pattern upon it, and the speeds of the roller and bowl were equal. A patent was taken out for a combination of a patterned roller with a bowl moving at unequal speeds. The invention was held not to be one which could be the subject of a valid patent, as it amounted to nothing more than showing how to use an existing machine more beneficially than had been previously known. Although the patentee might have discovered that by making the *patterned* roller and the bowl move at different speeds instead of at the same speed, and by moving the fabric transversely when fed up, the machine could be worked more advantageously than formerly, he had no right to prohibit the owner from using his property as he thought fit. (*Ralston v. Smith*, 9 C. B. N. s. 117; affirmed by the *House of Lords*, 11 H. L. C. 223.)

In the case of *Patterson v. The Gas Light and Coke Company* (L. R. 2 Ch. D. 812, L. R. 3 App. Cas. 239), a patentee claimed the employment of sulphides of calcium in separate purifiers as a means of purifying coal gas from sulphur existing in other forms than that of sulphuretted hydrogen. Now, as it was well known to chemists, and had been long taught in books, that sulphides of calcium would absorb sulphur compounds—moreover, as it was plain that if sulphide of calcium was to be used, a separate holder must be employed, and as no special apparatus was suggested, it was held that there was no invention that would support a patent. The same patentee also claimed a method or system of employing lime purifiers in succession, whereby the contents of all the purifiers, or any required number of them, could be converted into sulphides of calcium, and also, if required, be maintained in that condition. Now, lime purifiers in succession had been in general use for a long time, and the patentee had not devised either a new process or any new apparatus. What he really thought he had discovered was that if the carbonic acid, which is the first thing taken up by the lime, was

allowed to enter the last purifiers, it would have a deleterious effect on the purifying process. It ought, therefore, to be removed at the beginning of the operation. But this, though it might be a very useful piece of advice, and an instruction of great value, was held by the Court of Appeal not to constitute of itself the subject-matter of a patent.

A specification claimed the use of solid naphthaline prepared in the form of sticks, rods, or pellets, for the enrichment of illuminating gas. Now as liquid naphthaline had been previously applied for enriching illuminating gas, and as solid naphthaline in the granular form and in the form of sticks was a known article, it was held that this application of a known article to a purpose for which the same article in another form had been previously applied was not proper subject-matter for a patent. (*Alco-Carbon Light Co. v. Kidd*, 4 R. P. C. 535.)

The following have been judicially held not to be patentable inventions: The use of steel hoops in a petticoat instead of whalebone hoops (*Thompson v. James*, 32 Bea. 570); the use of hollow iron columns filled with water in the construction of buildings and for the support of fire-proof floors (*Tickelpenny v. Army and Navy Co-operative Society*, 5 R. P. C. 405); the substitution of a hinge or pivot for a slide in certain cooking apparatus (*Fletcher v. Aiden*, 5 R. P. C. 46); the substitution of a pivot for a hinge in a nail-making machine (*United Horseshoe & Nail Co. v. Swedish Horse Nail Co.*, 6 R. P. C. 1).<sup>1</sup>

#### PATENTS FOR 'APPLICATIONS.'

These are patents for inventions which have reference to the application of an existing article to a purpose for which other similar articles have been previously used; or

<sup>1</sup> Other cases in which the inventions were held to be insufficient to support patents were *White v. Toms* (32 L. J. Ch. 204); *Jackson v. Needle* (2 R. P. C. 191); *Sharp v. Brauer* (3 R. P. C. 193); *Guilbert-Martin v. Kerr* (4 R. P. C. 18); *Britain v. Hirsch* (2 R. P. C. 74); *S. C.* on app. 226; *Walker v. Longford Wire Co.* (4 R. P. C. 281); *Rowcliffe v. Longford Wire Co.* (4 R. P. C. 287); *Haslam Co. v. Hall* (5 R. P. C. 21); *Longbottom v. Shaw* (5 R. P. C. 497; affirmed on appeal, 6 R. P. C. 143); *Gaulard and Gibb's Patent* (5 R. P. C. 525); *Herrburger v. Squire*, on appeal (6 R. P. C. 194); *Windover v. Morgan* (7 R. P. C. 130).

to the application of a well-known process to produce a well-known article; or to the application of a well-known process to effect a result in a well-known article after the same process has been publicly applied to an analogous article. When there is nothing new in the machinery or methods employed, patents for such applications are not favoured by the law, which looks upon the inventions as wanting in ingenuity or novelty. The rule is well established that the mere application of an old mechanical contrivance to an analogous purpose is not an invention for which a patent can be granted. 'In all the cases in which a patent has been supported' (said *Lord Campbell* in *Brook v. Aston*, 8 E. & B. 478) 'there has been some discovery, some invention. It has not been merely the application of the old machinery in the old manner to an analogous substance. That cannot be the subject of a patent.'

In *Harwood v. Great Northern Railway Company* (2 B. & S. 208), *Sir A. Cockburn, C. J.*, said: 'Although the authorities establish the proposition that the same means, apparatus, or mechanical contrivance cannot be applied to the same purpose, or to purposes so nearly cognate and similar as that the application of it in the one case naturally leads to the application of it when required in some other, still the question in every case is one of degree, whether the amount of affinity or similarity which exists between the two purposes is such as that they are substantially the same; and that determines whether the invention is sufficiently meritorious to be deserving of a patent.'

'If the use or application is merely analogous' (said *Mr. Justice Chitty* in *Lister v. Norton*, 3 R. P. C. 205) 'it is plain that the patent cannot be granted. When it is not only analogous, but is sufficiently out of the beaten track, the patent may be upheld. These general propositions are not precise or scientific. It is impracticable to frame propositions of a scientific character on this point. Every case must be decided on its peculiar merits and with reference to its own special circumstances. The authorities are necessarily decisions on particular cases, and are useful only

as affording some guide to the decision of the case before the Court.'

The following cases will illustrate the law as thus laid down by these learned judges:—

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, viz. iron, by a well-known process, viz. casting, to the production of a well-known article, tubular boilers. (*Ormson v. Clark*, 13 C. B. n. s. 337; *S. C.* in error, 14 C. B. n. s. 475.)

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. (*Horton v. Mabon*, 12 C. B. n. s. 437; *S. C.* in error, 16 C. B. n. s. 141.)

'The use of a new material to produce a known article is not the subject of a patent,' said *V. C. Malins*, in *Rushton v. Crawley* (L. R. 10 Eq. 522), a case where a man had taken out a patent for the use of a kind of wool called Russian tops in the manufacture of artificial hair. (See also *Thompson v. James*, 32 Beav. 570.)

In the case of *Losh v. Hague* (1 W. P. C. 202), the question was reduced to this—Is a man who finds a particular construction of wheel already in use for carriages on ordinary roads entitled to a patent for applying it to railway carriages, such application not having been previously made? *Lord Abinger* remarked 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 in-

vented 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 for an alleged infringement of a patent for improvements in separating the fibres of cocoa-nut husks, 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. See also *Tatham v. Dania*, 1 Griff. P. C. 213.)

So, in the case of *Regina 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 having been previously employed 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 construction of flues, uncovered tubes having been previously used in a similar way.

In *The Patent Bottle Envelope Co. v. Seymer* (5 C. B. n. s. 164) it was held that the use of a model or mandrel 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.

On the trial of *Bush v. Fox* (Macr. P. C. 163), it appeared that the invention, for an infringement of which the action was brought, consisted in the use of a caisson or hollow cylinder for building under water. It was proved at the trial that a similar caisson for building on land had been described in the specification of a patent granted several years previously. This, therefore, was only a new application of a machine previously applied to another purpose. 'I think' (said *Sir F. Pollock, C. B.*, to the jury) 'that a man cannot, if he has applied 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."' On appeal to the House of Lords (Macr. P. C. 179), the judge's direction was held to be right.

In *Brook v. Aston* (8 E. & B. 478), it appeared that the plaintiff had obtained a patent in 1856 for improvements in finishing yarns of wool and hair; and that in 1853 he had taken out a patent for a process precisely similar except that it was applicable to the finishing of cotton and linen yarns. The patent of later date was held bad because the alleged invention was only the application of an old machine in an analogous manner to another but similar object. This decision was affirmed by the Court of Exchequer Chamber (5 Jur. n. s. 1025).

In the case of *Harwood v. The Great Northern Railway Company* (2 B. & S. 194; 11 H. L. C. 654), 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 employed to fasten pieces of timber



together in the construction of bridges, and had also been used in various articles of machinery. *Mr. Justice Willes* said the invention for which the patent had been obtained was 'the mere application of an old contrivance in the old way to an analogous subject without novelty or invention in the mode of applying such old contrivance to the new purpose.'

Jordan's specification claimed the construction of ships with an iron frame combined with an external covering of timber planking for the sides, bilges, and bottoms. It appeared that a combination of wood and iron in the construction of ships was well known previous to the patent, and that frames partly of iron and partly of wood had been coated with iron. The Court decided that as iron and wood had both been long used in the construction of vessels, the application of wooden planking to the iron frame of a vessel, without any peculiarity in the nature of that planking, could not be the subject-matter of a patent. The alleged invention was as to one part nothing more than the substitution of one well-known and analogous material for another—that is, wood for iron—to effect the same purpose on an iron vessel; and as to another part, it was the application of the same old invention, viz. planking with timber, which had been formerly done on a wooden frame, for an analogous purpose on an iron frame. (*Jordan v. Moore*, L. R. 1 C. P. 624.)

If an old combination used in one kind of machine is applied to another but cognate kind of machine in which it had not been previously found, this application will not be considered novel for the purpose of supporting a patent unless some ingenuity or invention is displayed in the application. A patented improvement in a combined mowing and reaping machine consisted of a contrivance by which the cutting knife could be made to revolve more rapidly when cutting grass than when cutting corn. It was shown at the trial of an action for an infringement that a similar contrivance had been previously applied to a hay-making machine with the view of driving the tossing rakes quickly

or slowly at the will of the operator. The patent was therefore held to be invalid. (*Bamlett v. Picksley*, 1 Griffin, P. C. 40.) And so, the use of a guide in a frilling machine for the purpose of keeping down the work was held by *Sir G. Jessel, M. R.*, in *Hill v. Tombs* ('Engineer,' April 15, 1881, p. 274), not to be a patentable invention, because 'that was the use of known means for an analogous purpose,' guides of similar character having been employed in many other machines.

A patent was obtained for supporting the front of a carriage by C springs. In an action for infringement it was held by the House of Lords, reversing the decisions of the Courts below, that this was only the application of a known article to an analogous purpose, since similar springs (for they were not, strictly speaking, C springs) had been previously used at the back of a carriage, and in their application to the front there was no invention. (*Windover v. Morgan*, 7 R. P. C. 130.)

Compare the preceding cases with *Penn v. Bibby* (L. R. 2 Ch. 127). Mr. John Penn obtained a patent for an improvement in bearings and bushes for the shafts of screw-propellers, which consisted in grooving the inner surfaces of the bearings of the shaft, and placing in the grooves strips of wood, which projected beyond the inner surface of the metal bearings, so as to support the rubbing action of the shaft whilst water was allowed to circulate freely in the intermediate channels. The metal bearings previously employed had been found unable to withstand for any length of time the friction of the screw-shaft, and it almost seemed as if the screw-propeller would have to be abandoned; but Mr. Penn's simple contrivance got over the difficulty, and the invention came into general use. It was contended that the alleged invention was merely a new application of an old and well-known thing, viz. wood, and the wooden bearings of grindstones and waterwheels were adduced as showing that the invention was not novel. 'In every case of this description' (said *Lord Chelmsford*), 'one main consideration seems to be whether the new application lies so

much out of the track of the former use as not naturally to suggest itself to a person turning his mind to the subject, but to require some application of thought and study. Now, strictly applying this test to the present case, it appears to me impossible to say that the patentee's invention is merely the application of an old thing to a new purpose. The only examples of old use . . . are of a totally different character, and for a totally different object. It is difficult to believe that bearings of this description could ever have suggested the application of wood to the bearings of screw-propellers in the way described in the patent.'

A patent was obtained for improvements in the manufacture of glass. The invention consisted of a mode of forming the sides of the chambers, where the materials were fused, in such a manner that a current of cool air might circulate and so prevent over-heating. Although the principle was previously known, yet, as the contrivance when applied to the manufacture of glass rendered the process of melting less costly and less dangerous, the patent was held good. (*Cannington v. Nuttall*, L. R. 5 H. L. 205.)

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 comprised in the specification under the first patent. 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 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 Newton's patent, that the two applications of soft metal were essentially different, and Newton's invention was not wanting in novelty. (*Newton v. Vaucher*, 6 Exch. Rep. 859.)

*Chemical Inventions.*—The same distinction, which, it has been seen, is made between mechanical applications brought about by an obvious exercise of the inventive faculty and those where it is scarcely appreciable, holds good with regard to the applications of the chemical properties of matter. Thus, in *Calvert v. Ashburn* (Pract. Mech. Journal, vol. ii. 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*. See also the observations of *Lord Hatherley* and *Lord Blackburn* in *Bailey v. Roberton* (L. R. 3 App. Cas. 1055, 1073, 1079).

This case, in which the amount of invention was adjudged too small to support the patent, should be compared with that of *Young v. Fernie* (4 Giff. 597, 612), a suit for an injunction to restrain the infringement of a patent for obtaining paraffine oil by the distillation of bituminous *coals*, wherein it was proved that previously to the plaintiff's invention paraffine oil had been extracted from bituminous *shale* by distillation. It was argued for the defendants, on the authority of *Regina 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 *V. C. Stuart* said that there seemed to be no analogy between the cases cited and the present one. And in giving judgment in favour of the validity of the patent, his Honour observed, '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 boundless 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.' (See also the case of *Muntz v. Foster*, *ante*.)

In *Hills v. London Gas Light Company* (5 H. & N. 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.)

*Patents for Improvements on Inventions the Subject of Existing Patents.*—Inventors after obtaining a patent frequently discover that their invention is capable of considerable improvement, and they think it desirable to take out a second patent for the improvements.

In *Lister v. Leather* (8 E. & B. 1004), it was held that a second patent for an improvement on an invention which is the subject of a previous patent afterwards assigned to the second patentee is not void as being contrary to public policy. And the same rule holds good in regard to a second patent obtained by the same inventor.

A patented invention which was afterwards greatly improved by a second patent obtained by the same inventor is not on that account thrown open to the world. (*Thomson v. Batty*, 6 R. P. C. 100.) Nor is a patent defeated because later inventions improved the articles produced, and they ceased to be made in accordance with the directions of the specification. (*Edison & Swan Co. v. Holland*, 6 R. P. C. 243.)

## CHAPTER VI.

## WHO MAY BE A PATENTEE.

By the fourth section of the Patents Act of 1883, any person, whether a British subject or not, is empowered to make application for a patent. Two or more persons may make a joint application, and a patent may be granted to them jointly. By the fifth section of that Act, an application must contain a declaration to the effect that the applicant is in possession of an invention, whereof he, or in the case of a joint application, one or more of the applicants, claims or claim to be the true and first inventor or inventors.

No application will be entertained at the Patent Office unless the person or persons claiming to be the true and first inventor or inventors are applicants (*Marshall's Application*, 5 R. P. C. 661), but other persons who are non-inventors may join in the application, and in that case the patent will be issued to all the applicants, who will be joint patentees. (Patents Act, 1885, s. 5.) Although there is no form enabling an inventor and an incorporated company to apply jointly for a patent, this may be done, since by sect. 117 of the Act of 1883 'person' includes a body corporate.

For a long series of years the strict letter of the statute of James 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, the administrators of the law always reading the word 'inventor,' in the statute, as embracing an importer. 'I must look on it (said *Jessel*, *M. R.*) as a sort of anomalous decision, not depending on any principle whatever, which has acquired by time and recognition the force of law.' The first decision on this point

since the Statute of Monopolies, was in the case of *Edgebery v. Stevens*, to be found in the second volume of 'Salkeld's Reports,' p. 477: 'If the invention be new in England a patent may be granted, though the thing was practised beyond sea before; for the statute speaks of new manufactures within this realm; so that if it be new here, it is within the statute; for the Act intended to encourage new devices useful to the kingdom, and whether learned by travel or by study, it is the same thing.'

In *Carpenter v. Smith* (1 W. P. C. 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.'

Previous to the Act of 1883 it had been decided (*Chappell v. Purday*, 14 M. & W. 318) that an alien might be the grantee of a patent; and *In re Wirth's Patent* (L. R. 12 Ch. D. 303), that a patent might be granted to an alien resident abroad for an invention communicated to him by another alien also resident abroad, but Form A of the Patents Rules, 1890, renders it necessary that the applicant for a communication patent must be resident in the United Kingdom (see p. 395). In *Beard v. Egerton* (3 C. B. Rep. 97), it was held that the grant might be taken either in the alien's name or in the name of a British subject in trust for him.

It has long been a common practice, which the new Act has not abrogated, to grant patents to British subjects resident in Great Britain in respect of inventions communicated from abroad. If the grantee is the agent of the foreign inventor, the letters patent are subsequently assigned to the latter or his nominee. But in these cases it is necessary for the applicant to state in his application that the subject-matter was communicated to him from abroad. (*Milligan v. Marsh*, 2 Jur. n. s. 1083.) (See the form of application A 1 in the second schedule of the Patents Rules, 1890.)

By the International Convention and section 103 of the Patents Act of 1883 a foreign patentee has an absolute right of priority for his invention for a period of seven months from

the date of his foreign application, notwithstanding any intermediate publication or use of the invention in this country. A British patent under the Convention will only be granted to the person who made the foreign application. It will not be granted to an agent. (*Shallenberger's Application*, 6 R. P. C. 550; *Carez's Application*, 6 R. P. C. 552.)

A British subject has never been permitted to obtain a patent for an invention derived from another British subject residing in the United Kingdom, and it seems doubtful whether a valid patent could be obtained in respect of an invention communicated by an alien permanently domiciled here.

No objection can be taken to a patent on the ground that one of the grantees is an infant. (*Cheavin v. Walker*, L. R. 5 Ch. D. 858.) And there can be no doubt that female inventors, whether married or single, are entitled to the grant of a patent.

In consequence of the decision of the Court in *Marsden v. Saville Street Foundry Co.* (L. R. 3 Ex. D. 203), a clause (sect. 34) was introduced into the Patents Act of 1883, by which it was provided that if a person possessed of an invention dies without making application for a patent for the invention, application may be made by, and a patent for the invention granted to, his legal representative; but every such application must be made within six months of the decease of such person, and must contain a declaration by the legal representative that he believes such person to be or to have been the true and first inventor of the invention.

By the twelfth section of the same Act (sub-section 3 *b*) it is enacted that if the applicant for a patent dies before the expiration of fifteen months from the date of application (and before the patent shall have been sealed), the patent may be granted to his legal representative, and sealed at any time within twelve months after the applicant's death.

The word 'patentee' as used in the Patents Acts signifies 'the person for the time being entitled to the benefit of the patent' (s. 46 of the Act of 1883).



## CHAPTER VII.

## PROCEDURE ON APPLYING FOR A PATENT—THE TITLE.

THE proceedings on the application for a patent<sup>1</sup> commence with the preparation of a Declaration, to the effect that the applicant is in possession of an invention whereof he, or in the case of a joint application one or more of the applicants, claims or claim to be the true and first inventor or inventors. With this is combined a petition that a patent may be granted to the applicant or applicants for the invention. The form of the declaration, which must bear the stamp of 1*l.*, is set forth in the second schedule to the Patents Rules, 1890. The declaration must be signed by the applicants, but need not be made under the Statutory Declarations Act, 1835. When left at the Patent Office it must be accompanied by either a provisional or complete Specification (see the next chapter), and that specification must in either case commence with the title (Patents Act, 1883, sect. 5). The application and specification are then referred by the Comptroller to an examiner, part of whose duty is to ascertain and report whether the title sufficiently indicates the subject-matter of the invention (sect. 6) ; and if he reports that the title does not sufficiently indicate the subject-matter of the invention, the Comptroller may require it to be amended (sect. 7). He is virtually empowered to make other amendments in the title under

<sup>1</sup> Stamped forms of application have been placed on sale at the chief post-offices of the United Kingdom. Applications, as well as any other document, notice, &c., required to be left at the Patent Office, may be sent in a prepaid letter through the post. See section 97 of the Act of 1883, and Rule 16*a* of the Patents Rules, 1890.

The procedure on applications is regulated by Rules 8, 9, 10, 16*a*, 17, 17*a*, and 23 of the Patents Rules, 1890.

sects. 7 and 9 of the Act of 1883. (*Dart's Patents*, 1 Griff. P. C. 307.)

#### THE TITLE.

The title is the short statement by which the inventor sets forth in very general terms the object of the invention; and this being repeated in the body of the declaration, and finally transferred into the patent, is styled the Title of the Patent. Thus he may apply for a patent in respect of 'Improvements in locomotive steam engines,' or for 'A new or improved sewing machine,' or for 'Improved methods of purifying illuminating gas.' The words here placed between marks of quotation would be the titles of the respective patents.

At a time when a provisional specification was not required to be lodged with the petition, and when consequently the title could not be officially compared with a description of the invention, it not unfrequently happened that the title was incorrect, and patents were sometimes lost from want of care in this particular. For if the title was too comprehensive—that is, if it extended to matters not included in the invention, the patent was bad. If, on the other hand, it was too narrow, besides excluding by its very terms something which the inventor might have secured, the patent would likewise be held bad in case the specification went beyond the title.

But now, since the title is accompanied by an outline or full description of the invention, in the shape of a provisional or complete specification, and the papers are submitted to an official examination, any false step that the inventor may make in regard to the title will probably be detected, and can be rectified. This, however, will involve delay and trouble, and the inventor will do well to take some pains to frame an unobjectionable title at first.

In framing the title the inventor must carefully avoid the use of language which will lay it open to the charges of being 'too large, uncertain, inapplicable, inexplicable, inconsistent, vague, ambiguous, and at variance with the specification'—charges which it appears from a reported case

were once heaped upon an unfortunate title relating to the simple matter of paving with wood.

With the view of showing the inventor who is engaged in preparing his application for a patent what are the principal errors to be avoided in framing the title, the following cases have been selected from those decided by the Courts under the old law.

Where the title bore evidence upon its face of an intention to deceive the public as to the subject-matter of the invention, this was a point which weighed heavily against the patentee. (*Cook v. Pearce*, 8 Q. B. 1044.)

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 'Certain improvements in the flageolet, whereby the fingering will be rendered more easy, and notes produced that were never before produced.' It appeared that only one new note was produced by the improved instrument, and this was held to be a fatal objection. (*Bainbridge v. Wigley*, Parl. Rep. 197.)

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 *Campion v. Benyon* (1 Carp. Rep. 418). The patent was for 'A new and improved method of making double canvas and sailcloth with

hemp and flax, or either of them, without any starch whatever ;' but it appeared that double sailcloth had been made without starch before the patent, and 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), *C. B. Pollock* stated that, when Attorney-General, he had 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 con-

tained 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.)

A patent was obtained for 'Improvements in machinery for the manufacture of bobbin net lace.' It was objected that the invention really was only for making a spot during a particular part of the process, and was useless where that addition was not wanted. The Court, however, overruled the objection. (*Fisher v. Dewick*, 1 W. P. C. 264.)

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*, 1 W. P. C. 312, 373; *Lister v. Norton*, 3 R. P. C. 203.)

## CHAPTER VIII.

## THE PROVISIONAL SPECIFICATION.

THE fifth section of the Patents Act of 1883 directs that the application<sup>1</sup> for a patent must be accompanied by either a provisional or complete specification. The latter instrument is the subject of the next chapter; it is to the former that we now draw the reader's attention. According to the third subsection of the same section, a provisional specification must describe the nature of the invention, and be accompanied by drawings if required; whilst by the fifth subsection it is directed that it must commence with the title. (As to size, form, &c., of the drawings, if any, see Patents Rules, 1890, rr. 30–33.) It ought not to comprise more than *one invention* (sect. 33), and the Comptroller may refuse to accept it if it does comprise more. (As to the meaning of the words 'one invention' see p. 96.) The applicant, however, is authorised by Rule 19 of the Patents Rules, 1890, to amend the application so as to make it apply to one invention only; and he can then make application, if he thinks proper, for separate patents for the other inventions. In that case every such application will be dated as of the date of the first application, as if originally made on that date.

<sup>1</sup> The form of the application is given as already stated in the second schedule to the Patents Rules, 1890, Form A. In case of an application on a communication from abroad Form A 1 must be used. For the form of provisional specification see Rules 5 and 6 (2) of 1890, and Form B in the second schedule to those rules. As to the procedure the reader is referred to the note on p. 89.

Specifications and all other documents must be written or printed in large and legible characters upon one side only of strong wide-ruled foolscap paper measuring thirteen by eight inches, leaving a margin of two inches on the left-hand; and the signatures of the applicants or agents thereto must be written in a large and legible hand (see Rule 10).

Then by the sixth section the Comptroller is directed to refer every application to an examiner, who is to ascertain and report to him whether the nature of the invention has been fairly described, and the application, specification, and drawings (if any) have been prepared in the prescribed manner. If the examiner reports (sect. 7 as altered by the 2nd sect. of the Patents Act, 1888) that the nature of the invention is not fairly described, or that the application, specification, or drawings has not or have not been prepared in the prescribed manner, or that the title does not sufficiently indicate the subject-matter of the invention, the Comptroller may refuse to accept the application, or require that the application, specification, or drawings be amended before he proceeds with the application; and in the latter case the application shall, if the Comptroller so directs, bear date as from the time when the requirement is complied with.

Where the Comptroller refuses to accept an application or requires an amendment, the applicant may appeal from his decision to the law officer, who will, if required, hear the applicant and the Comptroller, and may make an order determining whether, and subject to what conditions, if any, the application shall be accepted. (*Brown's Application*, 2 Griffin, P. C. 1.) When an application has been accepted, the Comptroller will give notice thereof to the applicant, and by Rule 21 of the Patents Rules, 1890, he will advertise such acceptance in the official journal of the Patent Office. If (subs. 5 of sect. 2, Act 1888), after an application for a patent has been made, but before the patent thereon has been sealed, another application for a patent is made, accompanied by a specification bearing the same or a similar title, the Comptroller, if he thinks fit, on the request of the second applicant, or of his legal representative, may, within two months of the grant of a patent on the first application, either decline to proceed with the second application or allow the surrender of the patent, if any, granted thereon.

Under section 4 of the Patents Act of 1885, where an

application for a patent has been abandoned or become void, the specification and drawings (if any) shall not at any time be open to public inspection or be published by the Comptroller.

When the legal representative of a deceased inventor intends to apply for a patent, under the authority of the 34th section of the Patent Act of 1883, the application must be made within six months of the decease, and it must contain a declaration by the legal representative that he believes the person whom he represents to have been the true and first inventor of the invention. An official copy of or extract from the will or letters of administration must accompany the application in proof of the applicant's title. (Rule 20 of 1890.)

*'One Invention.'*—It has been already stated that by sect. 33 of the Act of 1883 the provisional specification ought not to comprise more than one invention. The question whether a provisional specification comprises more than one invention will often be a delicate one, and no general rule can be laid down for the inventor's guidance. If the words of the Act were interpreted strictly patents would be greatly multiplied, whilst a liberal interpretation cannot go far in the face of the clear language of the statute. The Comptroller must be left to exercise his discretion on the facts of each case subject to appeal to the law officer. It has been said by a law officer that if there are several heads of invention it ought to be shown in the provisional specification that they have all a common object. Under the title of Improvements in Railway Carriages, an attempt to include improvements in the seats, doors, windows, coupling apparatus, and illumination would doubtless be a failure, and yet all these heads of invention have the common object of improving a railway carriage.

The following cases have been decided by the law officers on appeal and have been reported.

Where there is a new combination of parts and some of the subordinate parts are themselves new, they may all be included along with the entire combination in the same



specification. But where a specification describes a combination of parts and also comprises a minor combination which is stated to be applicable not only to the purpose of the entire combination but to a purpose distinct therefrom, the latter application must be considered a different invention and ought not to be included in the same specification. (*Jones's Patent*, 1 Griff. P. C. 265; *Hearson's Patent*, 1 Griff. P. C. 266; *Robinson's Patent*, 1 Griff. P. C. 267.)

Alternative devices for effecting the same object ought to be treated as one invention; for example, several devices of an analogous nature, or cognate devices, for securing the rails on a railway. (*Jones's Patent*, 1 Griff. P. C. 265.)

The thirty-third section of the Act of 1883 enacts that it shall not be competent for any person in an action or other proceeding to take any objection to a patent on the ground that it comprises more than one invention.

*Office of the Provisional Specification.*—A general description of the invention, fairly showing its real nature, is sufficient for the provisional specification. An applicant is not bound to describe the way in which his invention can be carried into effect. (*Woodward v. Sansum*, 4 R. P. C. 174; *Siddell v. Vickers*, 8 R. P. C. 426.) It is enough if its principal and essential features are set forth.

In the next chapter it will be shown that it is not allowable to vary the invention in any important respect when the complete specification is in preparation, or to introduce new matter into that instrument; and the chief object of the provisional specification is to afford means for securing the identity of the invention at the time of application and when finally specified.

The provisional specification is not intended to ascertain the *entirety* but the *identity* of the invention, said *Pollock, C. B.*, in *Newall v. Elliott*, 1 H. & C. 797. And see also *Foxwell v. Bostock*, 4 De G. J. & S. 298.

‘The office of the provisional specification’ (said *Mr. Justice Byles* in *Newall v. Elliott*, 4 C. B. N. S. 269) ‘is only to describe generally and fairly the *nature* of the invention, and not to enter into all the minute details

as to the manner in which the invention is to be carried out.'

'A provisional specification' (said *Sir G. Jessel, M. R.*, in *Stoner v. Todd*, L. R. 4 Ch. D. 58) 'is not intended to contain a complete description of the thing so as to enable any workman of ordinary skill to make it, but only to disclose the invention—fairly, no doubt, but in its rough state, until the inventor can perfect its details.'

'The office of the provisional specification' (said *Lord Chelmsford* in *Penn v. Bibby*, L. R. 2 Ch. 127) 'is to describe the nature of the invention, not with minute particularity, but with sufficient precision and accuracy to inform the law officer what is to be the subject-matter of the patent. It is not at all necessary that the provisional specification should describe the mode or modes in which the invention is to be worked or carried out.'

For further remarks by various learned judges as to the office of the provisional specification, see *Woodward v. Sansum* (4 R. P. C. 178), *Siddell v. Vickers* (5 R. P. C. 79, 426), *Crampton v. Patents Investment Co.* (5 R. P. C. 397).

When an inventor is engaged in preparing his provisional specification, he ought to keep in mind that every part of the invention, excepting details, intended to be claimed by the complete specification, ought to be foreshadowed in the preliminary instrument.

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. Under the old law it was held that a patent obtained upon a second provisional specification, when filed within the six months' term of provisional protection, was valid, as the first specification had not become public by the mere fact of abandonment. And in *Lister v. Norton* (3 R. P. C. 206) it was held that where an inventor had lodged a provisional specification, and then within six months had lodged a second one for the same invention, proceeding upon the latter to obtain a patent dated in 1881, it was no objection to the patent

that the patentee had in the interval between the dates of lodging the two specifications, and therefore before the date of his patent, publicly exercised his invention and sold the products.

By the fourteenth section of the Patents Act of 1883, where an application for a patent in respect of an invention has been accepted, the invention may during the period between the date of the application and the date of sealing such patent be used and published without prejudice to the patent to be granted for the same; and such protection from the consequences of use and publication is termed provisional protection.

This protection, however, gives the applicant no rights against the public. He is only protected against the consequences of his own publication in case of his employing workmen, making experiments, or exercising the invention (*Ex parte Bates & Redgate*, L. R. 4 Ch. 577); that is to say, he will not thereby prejudice the patent afterwards granted to him. He must not forget, however, that as he cannot take any legal proceedings for infringements committed before the publication of the complete specification (sect. 13), his dealings with the invention even under protection should be conducted with due caution.

## CHAPTER IX.

## THE COMPLETE SPECIFICATION.

WHETHER there ever existed an implied compact between a patentee and the public with regard to a disclosure of the invention, as many lawyers formerly supposed and some doubted, is a question which it is unnecessary to discuss in these pages. It is sufficient for all practical purposes to say that the Patents Act of 1852 imposed upon every patentee the duty of particularly describing and ascertaining the nature of the invention, and in what manner it was to be performed; and that the Patents Act of 1883 has laid upon every applicant a like obligation in identical language (sect. 5, subs. 4). The instrument by which the applicant undertakes to satisfy the requirements of the law is known as the Complete Specification. It is by this instrument that the public are made acquainted with the inventor's secret, and he is bound 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.

The reader will perceive before he arrives at the end of this chapter that the security of a patentee's privileges largely depends upon the shape given to this instrument. It is therefore necessary that he should exercise the greatest care and circumspection in its preparation. As Sir George Jessel, then Master of the Rolls, once remarked in court, 'it is very difficult to draw a complete specification.' And the judges on the bench very frequently complain of the ambiguities, obscurities, and other defects of the specifica-

tions that go before them, not only rendering the task of interpretation difficult, but putting in peril the whole edifice which the patentee has laboriously built. It may be thought, perhaps, that after the document has passed the ordeal of official examination no further question ought to arise as to its sufficiency. An inventor, however, should not place too great reliance upon this, but should adopt every means in his power to make not only the complete but the provisional specification perfectly correct, and in accordance with both the letter and the spirit of the law, that they may, if at any time disputed, be held good upon their own merits.

After an account of the procedure has been given the greater part of this chapter will be devoted to a statement of the rules by which the inventor should be guided in preparing this important instrument. These rules will make him acquainted with the chief requirements of the law, and will put him on his guard as to the faults which he is most likely to commit. Our remarks will be supported throughout by references to the reported cases.

#### PROCEDURE.

We have seen in the last chapter that, by the fifth section of the Patents Act of 1883, an application for a patent must be accompanied by either a provisional or a complete specification. In the great majority of cases an inventor needs further time for making experiments and testing the invention with a view to its improvement and the working out of details, all which may be safely done under the protection of a provisional specification; but if he lodges the complete instrument at the time of application he deprives himself of the opportunity of improving the invention, and of adding, perhaps greatly, to its value. Moreover, inventors who wish to obtain patents in other countries should bear in mind that the previous publication of an invention by a complete specification in this country may be a bar to a valid patent unless the case is one that

falls within the operation of the fourth Article of the International Convention as to Patents.

The complete specification, whether left on application or subsequently, must, in the words of the Act, 'particularly describe and ascertain the nature of the invention, and in what manner it is to be performed, and must be accompanied by drawings if required.' It must commence with the title, and must end with a distinct statement of the invention claimed. The form of the instrument is Form C, given in the second schedule of the Patents Rules, 1890.<sup>1</sup> If left with the application (sect. 6) the papers are referred by the Comptroller to an examiner, whose duty it is to ascertain and report to the Comptroller whether the nature of the invention has been fairly described, and whether the application, specification, and drawings (if any) have been prepared in the prescribed manner, and the title sufficiently indicates the subject-matter of the invention. If the examiner reports in the negative, the Comptroller may require the application, specification, or drawings, to be amended before he proceeds with the application, subject to appeal to the law officer, who, after hearing the applicant and the Comptroller, may make an order determining whether, and subject to what condition, if any, the application shall be accepted. When an application has been accepted, the Comptroller will give notice thereof to the applicant.

If the applicant (sect. 8) does not leave a complete specification with his application, he may leave it at any subsequent time within nine months from the date of application.<sup>2</sup> But by the third section of the Act of 1885 the Comptroller has power to extend the time for another

<sup>1</sup> A fee of 4*l.* is payable on filing a complete specification with the application: if filed afterwards the fee is 3*l.* As to the size of paper, &c., see the footnote on page 106.

<sup>2</sup> Whenever the last day for leaving a document at the Patent Office shall happen to fall on Christmas Day, Good Friday, or on a Saturday or Sunday, or on a day observed as a holiday at the Bank of England, or on any day observed as a public fast or thanksgiving, the document may be left on the day next following any of these days (sect. 98).

month on payment of the prescribed fee. And Rule 50 of the Patents Rules, 1890, requires the application for an extension of time to state in detail in what circumstances and upon what grounds the extension is applied for. The Comptroller may require proof of the applicant's allegations.

If the complete specification is not left within due time the application will be deemed to be abandoned. The nine months will expire on that day of the ninth month which corresponds to the day of the application. Where a complete specification is left after a provisional specification the Comptroller will refer both to an examiner, for the purpose of ascertaining whether the complete specification has been prepared in the prescribed manner, and whether the invention particularly described in the complete specification is substantially the same as that described in the provisional. If the examiner reports that these conditions have not been complied with, the Comptroller may refuse to accept the complete specification unless and until the same shall have been amended to his satisfaction; but such refusal is subject to appeal to the law officer, who, if required, will hear the applicant and the Comptroller, and may make an order determining whether and subject to what conditions the complete specification shall be accepted (subsect. 3).

The fact that the complete narrows the range of the provisional specification (*e.g.* where the provisional specification sets forth a principle, whilst the complete only claims special mechanism) affords the Comptroller no ground of itself for refusing to accept the former. (*Everitt's Case*, 2 Griffin P. C. 27.)

In the opinion of two law officers, if the specification ends with a real statement of the invention claimed, distinct from the description of the invention in the body of the specification, the Patent Office has no power to inquire whether the claim is in conformity with the preceding description or not. But a claim which says no more than 'I claim the improved machine substantially as described' would not be enough. That would be held to be merely a

colourable compliance with the 5th subs. of sect. 5 of the Act of 1883, and not 'a distinct statement of the invention claimed.' (*Smith's Patent*, 1 Griffin P. C. 268.)

In *Siddell v. Vickers* (5 R. P. C. 416) it was held that the 5th subs. of sect. 5 of the Act of 1883 is merely directory, and that non-compliance with the direction does not invalidate the patent.

As a patentee cannot recover damages in respect of infringements committed before the publication of the complete specification (sect. 13 of the Act of 1883), it is desirable in many cases to file it with as little delay as possible.

By subs. 4 of sect. 9 of the Act of 1883, unless a complete specification is accepted within twelve months from the date of application, then (save in the case of an appeal having been lodged against the refusal to accept) the application will become void at the expiration of that time. But the Comptroller is empowered, by sect. 3 of the Act of 1885, to extend the time for three months on payment of the prescribed fee.

In the event of the applicant's death before leaving a complete specification, no power is expressly given by the Act to his legal representatives to leave a specification at the Patent Office, or to the Comptroller to accept it if tendered. But perhaps it may be held that such powers are impliedly given by subsection (3 b) of the twelfth section of the Act of 1883.

On the acceptance of the complete specification the Comptroller will give notice thereof to the applicant, and will advertise the acceptance in the official journal, and the application and specification or specifications, with the drawings, if any, will then be open to public inspection (sect. 10, and Rules 21 and 22).<sup>1</sup>

After the acceptance of a complete specification, and

<sup>1</sup> If anyone wishes to be informed as soon as a complete specification is accepted, or an application for an amendment is entered, he should forward a copy of Form Q (bearing a stamp of 5s.), with a request for such information.



until the date of sealing a patent in respect thereof, or the expiration of the time for sealing, the applicant shall have the like privileges and rights as if a patent for the invention had been sealed on the date of the acceptance of the complete specification: Provided that an applicant shall not be entitled to institute any proceeding for infringement unless and until a patent for the invention has been granted to him (sect. 15).

It was decided in *Ex parte Henry* (L. R. 8 Ch. 167) that a second applicant who had filed a complete specification along with his petition under the ninth section of the Patents Act of 1852, and had thereby become entitled for six months to 'the like powers, rights, and privileges, as might have been conferred on him by letters patent duly sealed, as of the date of the application,' did not acquire the rights of a patentee so as to prevent a person who had previously applied for a patent for a similar invention from obtaining a patent.

It is directed by section 9, subsection 5 (as amended by sect. 3 of the Act of 1888), that the reports of examiners shall not in any case be published or be open to public inspection, and shall not be liable to production or inspection in any legal proceeding, unless the court or officer having power to order discovery in such legal proceeding shall certify that such production or inspection is desirable in the interests of justice, and ought to be allowed. Specifications accompanying applications which have been abandoned or become void are not to be open to public inspection or published (sect. 4 of the Act of 1885).

*Clerical Errors.*—In case of clerical errors in a specification they could only be amended formerly by order of the Master of the Rolls. (*Johnson's Patent*, L. R. 5 Ch. D. 503, and the cases there cited.) This jurisdiction still subsists. (*Re Gare's Patent*, L. R. 26 Ch. D. 105.) In *Dixon's Patent* (January 15, 1881) the M. R. required from the applicant an undertaking not to take proceedings for infringements committed before the date of the amending order. But now, by sect. 18 of the Act of 1883, such

errors may be amended, after the patent has been granted, by the Comptroller on such terms as he may think fit. Before the issue of the patent clerical errors in or in connection with the application may be corrected by him under the 91st section of the Act of 1883.

#### DRAWINGS.

The Patents Act of 1883 (sect. 5, subsect. 4) directs that a complete specification must be accompanied by drawings if required.<sup>1</sup> Those who are called upon to interpret the instrument will 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. (*Abbott, C. J.*, in *Bloxam v. Elsee*, 1 C. & P. 564.) 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 relation of the parts will be clear at once through a visual representation, when a verbal description might 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.

In *Arnold v. Bradbury* (L. R. 6 Ch. 706) it was contended by the defendants in a suit for restraining the infringement of a patent for an improved ruffle, and the

<sup>1</sup> Rules 30-33 of the Patents Rules, 1890, contain regulations as to the sizes and methods of preparing the drawings accompanying the provisional or complete specifications. Rule 33 directs that if an applicant desires to adopt the drawings lodged with his provisional specification as the drawings of his complete specification he should refer to them as those 'left with the provisional specification.'

machinery for making the same, that the patentee had not described the mode in which the ruffle was made; but *Lord Hatherley, C.*, held that as the machine was very simple, and as the drawing showed how it was worked, that was sufficient. (See also *Hastings v. Brown*, 1 E. & B. 454; *Morton v. Middleton*, 1 Cr. S. 3rd Ser. 722; *Daw v. Eley*, L. R. 3 Eq. 500 n., 14 W. R. 126; *Poupard v. Fardell*, 18 W. R. 127.)

It seems that a patentee will not be allowed, in an action brought by him for an infringement, to refer to a drawing as descriptive of a material part of the invention not described in the letterpress of the specification. (*Clark v. Adie*, L. R. 10 Ch. 667; affirmed on appeal, L. R. 2 App. Cas. 315; *Macfarlane v. Price*, 1 Stark, 199, 1 W. P. C. 74 n.)

In the matter of *Pullan's Patent* (May 1878), leave was given by the Lord Chancellor upon an *ex parte* application to correct a filed specification by the addition of drawings alleged to have been omitted through inadvertence. The drawings so added were not described in the specification. Some months after the addition was effected an application was made to the Lord Chancellor by a person who had been threatened with an action for infringing the patent to re-hear the original application. The Lord Chancellor decided to hear the matter afresh, and upon reading the affidavits filed on both sides, and finding that his order had been made on imperfect information, ordered the added drawings to be struck out of the specification, with costs.

#### RELATION OF THE COMPLETE TO THE PROVISIONAL SPECIFICATION.

We have seen that the provisional specification need not contain all the details by which the invention is proposed to be carried into effect; it is sufficient if a broad outline of the invention is there sketched, so that its whole nature is ascertainable. On the other hand, it is permissible for a patentee to let drop some of the features of the provisional specification when he comes to prepare his complete specification, provided there is no fraud; that the

essential features of the invention are preserved; and that the complete specification does not claim something different from the invention described in the provisional specification. (*Thomas v. Welch*, L. R. 1 C. P. 192; *Penn v. Bibby*, L. R. 2 Ch. 134; *Stoner v. Todd*, L. R. 4 Ch. 58; *Wright v. Hitchcock*, L. R. 5 Ex. 46.)

It is essential that the nature of the invention shall be the same, but upon principle and authority (said *Lopes, L. J.*, in *Woodward v. Sansum*, 4 R. P. C. 178) it is clear that improvements in the arrangement of the mechanism, in the relative position and adaptation of the different parts with the view of producing the same results, the substitution of mechanical equivalents and modifications and developments within the scope of the invention set out in the provisional specification are allowable.

Although portions of the provisional specification may within the limits above mentioned be omitted from the complete specification without endangering the validity of the patent; and although the invention set forth in the earlier document may be expanded and developed when the complete instrument comes to be prepared, in accordance with the fuller knowledge which the inventor may then possess, yet he must carefully keep within the lines originally laid down, and must sedulously avoid introducing into the complete specification anything which can be construed as a larger or different invention. A material addition to, or deviation from, the invention for which he originally sought protection will not be permitted. Thus, where the provisional specification set forth an invention for preserving animal substances in a fresh state for some time, which consisted in the application of a definite mixture of an aqueous solution of gelatine with an aqueous solution of bisulphite of lime, whilst the complete specification, in addition to the use of that mixture, claimed the use for the same purpose of an aqueous solution of the bisulphite of lime alone, this was held to be a distinct matter not covered by the provisional specification. It was an invention 'larger than and different from that disclosed

in the provisional specification,' and the patent was, therefore, invalid. (*Bailey v. Robertson*, L. R. 3 App. Cas. 1055, affirming the decision of the Court of Session in Scotland).

The plaintiff's provisional specification stated the invention to be an improved method of treating oils for various applications, and it set forth a particular method of thickening them. The complete specification claimed (1) the particular method of thickening oil limited to lubricating purposes; and (2) the combining of such thickened oils with mineral oils as thereinbefore described. The body of the specification stated that the combining of thickened oils with mineral oil, irrespective of the precise means adopted for thickening them, was part of the invention; that is, the invention was alleged to cover the combining of oils thickened by other methods than by the one claimed by the first claim. It was held by a Judge of the Court of Session, Scotland, that there was a fatal variance between the two specifications. (*Hutchison v. Patullo*, 4 R. P. C. 332.)

The title of one of Mr. Edison's important patents obtained in this country in the year 1877 was 'Improvements in instruments for controlling by sound the transmission of electric currents and the reproduction of corresponding sounds at a distance.' In the first part of the provisional specification the description of the invention referred entirely to the transmission of sound or the controlling of sound by means of electric currents; and in the latter part different methods of carrying out this invention under the varying conditions of use were alluded to. The patentee's complete specification described, in addition to the invention known as the Telephone, which was worked by electricity, a very ingenious instrument called the Phonograph, which is a purely mechanical contrivance and has nothing whatever to do with electricity or magnetism, nor has it necessarily anything to do with the transmission of sound to a distance. The inventor described it as a means of recording the sounds produced by the human voice or otherwise by causing the movements of a diaphragm to be registered on paper or soft sheet metal, and then the paper might be

used in an instrument to reproduce the sound upon a delicate diaphragm by giving to the same a vibration similar to that originally given by the voice. The mode of applying the phonograph, a complete instrument in itself, to the transmission of the sounds over a telegraph line was also described. It was held by *Mr. Justice Fry*, who presided at the trial of an action for the infringement of the patent, that the nature of the phonograph had not been fairly described in the provisional specification, and that the patent was therefore invalid. (*The United Telephone Co. v. Harrison*, L. R. 21 Ch. D. 746.)

See also *Penn v. Bibby*, L. R. 2 Ch. 127; *Horrocks v. Stubbs*, 3 R. P. C. 221; *Gaulard and Gibbs' Patent Appeal*, 6 R. P. C. 225; *King, Brown & Co. v. Anglo-American Brush Corporation*, in the Court of Session, Scotland, 6 R. P. C. 414.

An inventor is not bound to describe in his provisional specification any mode of carrying the invention into effect, but if he does this, and if, before lodging the complete specification, he discovers an improvement in such mode, or if he discovers a different mode, he is bound to give to the public in that instrument the benefit of what he has discovered, although there may be improvement and even invention which was not known to him at the time. Per *L. J. Cotton*, in *Woodward v. Sansum* (4 R. P. C. 175). And in the same case (p. 178) *L. J. Lopes* said: 'It is said the complete specification describes a new and separate invention not covered by the provisional specification. If this can be established the patent would be bad. A provisional specification was never intended to contain a complete and exhaustive description of the invention. It was intended to be sufficiently specific to disclose the nature of the invention so as to protect the inventor until the time for filing the complete specification, but permitting him in the meantime to perfect any details, to modify, supplement, and develop his invention, always keeping within what I may call the ambit of his invention as disclosed in his provisional specification.'

In *Bailey v. Robertson* (L. R. 3 App. C. 1055) Lord Blackburn said in the House of Lords that it is no objection to the complete specification if it shows that there has been discovery since lodging the provisional, and that something has been added by way of supplement to make the invention really workable, the nature of the invention remaining the same.

Under a patent for improvements in laying down marine telegraphic cables, certain guiding rings for controlling the delivery of the cable were described and claimed in the complete specification, although they were not mentioned in the provisional specification. It was held that the patent was not thereby invalidated. (*Newall v. Elliott*, 4 C. B. N. s. 269.)

In *Lucas v. Miller* (2 R. P. C. 155) it was held that matters of detail, even those that had not occurred to the inventor at the time of lodging the provisional specification, may be introduced into the complete instrument, if they give a better method of carrying out the invention or of working it more easily.

These cases show that when an inventor elaborates his invention and renders it specific, when he gives a more particular and detailed description of it in the complete specification, he will be allowed to follow out his original design, and to give a fair development of it, even to the addition of improved methods of carrying it into effect, but he must not make a new departure nor introduce anything that cannot be brought within the meaning and purport of the provisional specification.<sup>1</sup>

If any part of the invention, as described in the complete specification, does not fall within the title, the patent

<sup>1</sup> In the following cases the patents were attacked on the ground of variance between the complete and provisional specifications, but the objections were overruled in all: *Watling v. Stevens*, 3 R. P. C. 80; S. C. on appeal, 3 R. P. C. 151; *Moseley v. Victoria Rubber Co.*, 4 R. P. C. 248; *Morgan v. Windover*, 4 R. P. C. 417; affirmed on appeal, 5 R. P. C. 295; reversed on another point in H. L., 7 R. P. C. 130; *Siddell v. Vickers*, on appeal, 5 R. P. C. 416; *Crampton v. Patents Investment Co.*, 5 R. P. C. 397; S. C. on appeal, 6 R. P. C. 287; *Gaulard and Gibbs' Patent*, 5 R. P. C. 532.

will be invalid. (*Croll v. Edge*, 9 Scott, C. B. R. 479; *Crossley v. Potter*, Macr. P. C. 240.) However, where the title of a patent was for 'Certain Improvements in the Doors and Sashes of Carriages,' and 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).

A patentee will not be allowed to read the provisional specification with the view of aiding or supplying a defect in the complete specification. (*Mackelcan v. Rennie*, 13 C. B. N. s. 52.)

#### RULES TO BE OBSERVED IN PREPARING SPECIFICATIONS.

*Good Faith.*—The first thing that an inventor about to prepare his specification should bear in mind is, that he is bound to act with *good faith*. There must be no studied ambiguity or equivocal language; no attempt to keep anything secret; he must take the public into his confidence, and make a full disclosure of his invention; and the whole statement must be fair, open, explicit, and honest. If he acts in any other manner, it will go hardly with him when his specification comes to be examined in a court of justice.

*Definition of the Invention.*—The next point to be attended to is the accurate definition of the invention, so that the reader may clearly understand of what it consists. In the case of *Macfarlane v. Price* (1 Stark. 199; 1 W. P. C. 74), *Lord Ellenborough* said that the patentee in his specification '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. . . . 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*, 1 W. P. C. 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.'

In *Philpott v. Hanbury* (2 R. P. C. 33), the patent was held bad because the patentee had not told the public the nature of the invention in reasonably accurate language. 'It forms a condition' (said *Mr. Justice Grove*), 'without the fulfilment of which the patent is void, that the patentee should state the nature of his invention, in order that persons reading his specification should know, and should know with reasonable clearness and facility, what they are prohibited from using by the letters patent without his permission or licence.' In regard to the specification before him, the learned judge said that he could not satisfactorily frame any formula of words which would describe or reasonably define what the nature of the invention was. 'The specification has not disclosed what is the real nature of the invention which the patentee says he has made.'

And again, in *Fairburn v. Household* (3 R. P. C. 128, *S. C.* affirmed on appeal, 3 R. P. C. 263), a patent was held invalid because the specification did not indicate with anything approaching to clearness or certainty what it was that the patentee claimed as a novelty, what it was that he relied on as the real invention he sought to protect. (And see also *Rowcliffe v. Morris*, 3 R. P. C. 17.)

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. (*Eades v. Starbuck Waggon Co.* W. N. 1881, p. 160.)

When the invention is partly original and partly communicated from abroad, it would seem desirable that the respective parts should be distinguished in the specification. (*Renard v. Levinstein*, 10 L. T. N. S. 177.)

In the case of a patent for an invention communicated

from abroad, it is no answer to an objection that the specification did not sufficiently describe the invention, to say that the patentee has stated all that was communicated to him. (*Wegmann v. Corcoran*, L. R. 13 Ch. D. 65.) On the other hand, where an invention communicated from abroad is sufficiently described in the specification, it is not a valid objection to the patent obtained by an agent in this country, that the foreign inventor is possessed of information which has not been set forth in the specification. (*Plimpton v. Malcolmson*, L. R. 3 Ch. D. 351.)

*Must fully describe the means of carrying the invention into effect.*—Besides furnishing a lucid and precise definition of the invention, the inventor must set forth how it is to be carried into effect so that the promised result may be duly accomplished. The specification must show plainly how the aim and object of the invention can be achieved, and with that view all necessary details, directions, and explanations must be correctly given; all the parts, apparatus, materials, and ingredients must be accurately described; proportions, quantities, times, temperatures, and the like, so far as they are respectively material, must be stated, precisely if it can be done, approximately if that only is possible; whilst the needful processes and operations must be fully communicated and clearly unfolded. These things should be taken in proper order, and expressed in perspicuous language.

‘It is most important’ (said *Mr. Baron Alderson*, in *Morgan v. Seward*, 1 W. P. C. 170) ‘that patentees should be taught that they are bound to set out fully and fairly what their invention is. . . . The specification ought to contain a full description of the way in which it is to be done. . . . 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.’

The specification ought to mention everything 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*, 1 W. P. C. 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. (1 W. P. C. 54 n.) The specification of Neilson's patent omitted all mention of water-tuyeres; 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*, 1 W. P. C. 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*, 1 W. P. C. 70.) Again, under a patent for improvements in steam-engines and paddle-wheels, a difference which had to be made in the length 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. Seward*, 1 W. P. C. 182.) The drawing attached to the specification under a patent for improvements in lamps did not show, and the specification itself did not state, where the air was to be admitted in the second burner, and without admitting air the wick would not burn. *Jessel, M. R.*, held that the specification was insufficient; and to the argument that a workman would correct the drawing by putting in the opening, the judge replied that where the invention is of a trifling nature, and the whole merit very small, if a patentee undertakes to teach people how to do things better, he must fully describe his plan, and not leave anything for the invention of others. (*Hinks v. Safety Lighting Company*, L. R. 4 Ch. D. 607.)

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 airtight and watertight 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 the plaintiff had not duly described the nature of the invention, and in what manner it was to be carried out. (*Mackelcan v. Rennie*, 13 C. B. N. S. 52.)

The specification under a patent for an invention for preserving animal substances in a fresh state for a long time stated that it consisted in the application of certain solutions, numbered 1, 2, 3, and 4, to the matters intended to be preserved. The mode of applying the solutions numbered 2, 3, and 4 was set forth, but nothing was said as to the mode of applying solution No. 1. It was held both by the Court of Session in Scotland, and by the House of Lords on appeal, that the patent was bad on account of the want of a sufficient description of the manner in which the invention was to be performed. (*Bailey v. Robertson*, L. R. 3 App. Cas. 1055.)

The plaintiff's specification, filed in 1873, contained two claims; the first for a method of thickening oils for lubricating purposes; the second for combining thickened oils

with mineral oils. The patentee described his method of thickening, but not the process of mixing the oils, nor did he state any proportions. It was held in the Court of Session, Scotland, that if skill were required to make the oils combine under the second claim, the specification was defective; because the method of carrying out the invention had not been shown; and that if no skill were required there was no proper subject for a patent. (*Hutchison v. Patullo*, 5 R. P. C. 351.)

Grave doubts were entertained by the Lords Justices in the Court of Appeal with respect to the sufficiency of a specification which described an hydraulic machine, adapted, according to the evidence, to work only at high pressure, there being no advantage gained, as was admitted, in working it at low pressure. Now the patentee had not set forth this important fact in his specification. (*Ellington v. Clark*, 5 R. P. C. 327.)

Where a specification claimed a combination of three elements, and the third element was not stated or explained, the patent was held invalid. (*Gaulard & Gibbs' Patent*, 5 R. P. C. 535.)

*Description must not be vague and general.*—When a patentee attempts to secure a right of an extensive nature, the description of the process must not be vague and general. Thus 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.

However, in *Edison & Swan United Electric Light Co. v. Woodhouse* (4 R. P. C. 105), an action for the infringement of a patent for an electric lamp, it was contended by

the defendant that the specification was bad on account of vagueness, since the evidence showed that it was essential to success in preparing the lamp that the temperature should be gradually increased, and this was not stated. But, said *L. J. Fry*, 'if the language of a specification is clear enough to guide a competent workman and enable him to obtain the desired result, we cannot see how the Court can hold the language insufficient in point of law. No doubt it is for the Court and not for a workman to construe the specification, but if a workman says it is a sufficient guide to him, and the Court believes him, the Court must hold that as regards clearness of description the specification is in point of law sufficient.' (See also *Edison & Swan Co. v. Holland*, 6 R. P. C. 243.)

*Must precisely describe all materials and ingredients.*—A specification, in describing materials and ingredients required for carrying the invention into effect, must not employ general terms which cover what is unsuitable as well as what is suitable. The public has a right to look for definiteness and precision in this respect, and ought not to be put off with vagueness and loose generalities. Experiments would be required to discover which one of the various objects included under the general term is suitable, and that task the law declares ought not to be imposed upon the public. For instance, a specification stated that *fossil salt* should be employed. Now there are various kinds of fossil salt, but it was shown that the only kind fit for the object in view was *sal gem*, and it was, therefore, held that the specification had given an inadequate explanation of the matter. (*Turner v. Winter*, 1 W. P. C. 80.)

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, neutralised 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 an alkali, neutralised by an acid. An action was

brought for an infringement of this patent. The infringement complained of was the employment of borax in making cement, borax being composed of an acid (boracic acid) and an alkali (soda). Now if the patentee 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 alkalies, his claim was bad, because it was proved that there were some acids and alkalies which would not answer the purpose; and if he claimed only those acids and alkalies which were proper and suitable, he was bound to state in the specification what they were, otherwise experiments would be 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).

Under a patent for improvements on preserving animal substances for use as food, the specification stated that the invention consisted of 'the use of the alkaline and earthy sulphites.' But as it was shown that some of the earthy sulphites are poisonous, and that some of the alkaline sulphites possess properties which render them unsuitable for the purpose in view, it was held that the claim to the use of 'the alkaline and earthy sulphites' was too wide and vague, and that the specification ought to have defined more precisely the materials to be employed. (*Bailey v. Robertson*, L. R. 3 App. Cas. 1078.)

In *Wegmann v. Corcoran* (L. R. 13 Ch. D. 63), it appeared that the plaintiff had obtained a patent for an improved machine or apparatus for treating or preparing meal. The specification stated that the squeezing rolls of the improved machine were to have 'a surface consisting of a material containing so much silica as not to colour the meal or flour,' and the patentee preferred to make them of 'iron coated with china,' and finely turned with diamond tools. It was shown that there are two kinds of china—Oriental or Chinese china, which contains 73 per cent. of silica, and is very hard; whilst the china usually made in this country contains only about 40 per cent. of silica, and is much softer. Now the first kind of china would answer the pur-

pose, but the second would not. It was therefore held by the Court of Appeal, affirming the decision of the Court below, that although the invention was useful in milling operations, the specification was ambiguous and inadequate, as it did not state what kind of china was to be employed. Experiments would have been required to discover a suitable material for the apparatus.

Pooley took out a patent in 1874 for improvements in the manufacture of bread, the main feature of which was the employment of a mixture of wheat flour and malt flour in given proportions. When instructing his agents how to use his invention the patentee sent them a formula which was very different from that given in the specification; and in the course of time he issued other formulæ, all different from that specified. It was held at the trial of an action for an infringement of the patent, that on this evidence the specification had not properly set forth the invention. The directions sent out to the agents were to enable them to do that which, according to their testimony, they could not do from the specification. (*Pooley v. Pointon*, 2 R. P. C. 167.)

It is not 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.)

The names of articles mentioned in a specification must be taken to be used in their ordinary commercial sense. Thus, a direction in a specification to use dry arsenic acid in the manufacture of dyes was held to refer to the ordinary arsenic acid of commerce (which is dry to the touch, although it contains water in combination), not to anhydrous arsenic acid, which could not be commonly bought in the trade, and which would not answer the purpose. (*Simpson v. Holliday*, 20 Newt. Lon. J. 118; 5 N. R. 340; L. R. 1 H. L. C. 315.) And see *Sturtz v. De la Rue* (1 W. P. C. 83 n.); *Stevens v. Keating* (2 W. P. C. 183, 187); *Muntz v.*



*Foster* (2 W. P. C. 104); *Badische Anilin und Soda Fabrik v. Lerinstein*, House of Lords (L. R. 12 App. C. 710; 4 R. P. C. 468).

A person who takes out a patent for an invention consisting of the use of known materials in new proportions, though bound to state the most suitable proportions within his knowledge, 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.)

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, where the case is tried before one. (*Bickford v. Skewes*, 1 W. P. C. 214; *Derosne v. Fairie*, 1 W. P. C. 154; *Elliot v. Turner*, 2 C. B. 446; *Wallington v. Dale*, 7 Ex. 888.)

*Must describe the best method of operating.*—A patentee is bound to describe the most advantageous 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, however, that this was a prejudicial concealment, and held the patent to be invalid.

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 simply mentioning 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 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 anyone 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; 1 W. P. C. 88.)

There are many other cases which show that 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. Nothing of importance can be withheld or concealed without danger to the patent. In *Turner v. Winter* (1 W. P. C. 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.

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. Per *Alderson, B.*, in *Morgan v. Seward* (1 W. P. C. 170).

But a patentee is not bound to explain which of several methods, all more or less possible, is the most or the least advantageous; yet all the methods described by him must be more or less possible, and he is bound to state what methods are possible, and to avoid stating as possible the methods, if any, which are not. (*Badische Anilin und Soda Fabrik v. Levinstein*, L. R. 12 App. C. 710; 4 R. P. C. 449; *Kurtz v. Spence*, 5 R. P. C. 183.)

In *Sturtz v. De la Rue* (1 W. P. C. 88), 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*, 1 W. P. C. 158.) In *Walton v. Bateman* (1 W. P. C. 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. And in *Heath v. Unwin* (2 W. P. C. 248), *Coleridge, J.*, said, 'If the inventor of an alleged discovery, knowing of two equivalent agents for effecting the end, could by the disclosure of one preclude the public from the other, he might for his own profit force upon the public an expensive and difficult process, keeping back the simple and cheap one, which would be directly contrary to the good faith required from every patentee in his communication with the public.'

In *Neilson v. Harford* (1 W. P. C. 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.

*Must communicate the latest information.*—It frequently occurs that in the interval between the application and the

lodging of the complete specification, the inventor discovers that the original invention is capable of material improvement. The intervening period is allowed him for the very purpose of improving the details of his invention; and if he fails to communicate to the public the best information he possesses at the time of lodging the complete specification, the patent will be held void. In *Crossley v. Beverley* (1 W. P. C. 117) it was objected that the patentee had added something to the invention as finally specified, but, said *Bayley, J.*, 'I think that if between taking out the patent and filing the specification, the inventor makes a discovery which will enable it better to effectuate the thing for which the patent was obtained, not only is he at liberty to introduce them into his patent, but it is his bounden duty so to do, and it is not sufficient for him to communicate to the public the knowledge he has obtained before the specification.' And in *Woodward v. Sansum* (4 R. P. C. 166) *L. J. Cotton* said that an inventor is bound to give the public in his complete specification the benefit of what he has discovered, after filing his provisional specification, in regard to the mode of carrying the invention into effect, although there may be improvement and even invention which was not known to him at the time. (See also *Crampton v. Patents Investment Co.*, 5 R. P. C. 397, and the section on the relation of the complete to the provisional specification, *ante*, p. 107.)

It should, however, be kept in mind that the additions must strictly relate to the invention as it stood at the date of the application. The introduction of new heads into the specification or an extension of the subject-matter of the original invention will not be permitted. (*Crossley v. Potter*, Macr. P. C. 240; *Bailey v. Robertson*, L. R. 3 App. Ca. 1055.) 'The complete specification,' said *Lord Chelmsford* in *Penn v. Bibby* (L. R. 2 Ch. D. 58), 'is in a sense supplemental to the provisional specification, not going beyond nor varying from it as to the nature of the invention, but conveying additional information which may have been acquired during the currency of the provisional specification

as to the manner in which the invention is to be performed.'

*But need not set forth every application.*—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* (1 W. P. C. 356), and see *Badische Anilin und Soda Fabrik v. Levinstein* (L. R. 24 Ch. D. 176; S. C. in H. of L. 4 R. P. C. 466). But it must be borne in mind that a patentee cannot, by making a general claim, cover improvements and applications of which he was ignorant at the date of his specification. (*Tetley v. Easton*, Macr. P. C. 77.)

Where a patentee by his specification under a patent for the production of certain aniline colouring matters had claimed all the shades from red to brown producible by the various processes described in the specification, whilst only one shade was known to have any present commercial value, it was held by the court of first instance and afterwards by the House of Lords that he was not bound to indicate the respective advantages for dyeing purposes of the different shades of colour produced or to select the most valuable shade and give specific directions how to produce it. (*Badische Anilin und Soda Fabrik v. Levinstein*, L. R. 12 App. C. 710; 4 R. P. C. 464.)

*Must be intelligible to workmen of ordinary skill.*—The specification is to be considered as addressed to persons of ordinary skill and ability, acquainted with the particular subject. It must be intelligible to such persons, and the directions must be such that, by pursuing them, they would produce without difficulty the result which the patentee describes. (*Tindal, C. J.*, in *Gibson v. Brand*, 1 W. P. C. 631; *Beard v. Egerton*, 8 C. B. 165.) *Lyndhurst, L. C.*, said, in *Sturtz v. De la Rue* (1 W. P. C. 83 n.), 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* (1 W. P. C. 218), said that the specification is addressed, not to persons entirely ignorant of the subject-matter, but to artists of competent skill in the 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.

A specification ought to be so framed as to be understood by the ordinary workman using that amount of skill and intelligence which is fairly to be expected from him—not a careless man, but a careful man; though not possessing that great scientific knowledge or power of invention which would enable him by himself, unaided, to supplement a defective or correct an erroneous description. Per *Jessel, M. R.*, in *Plimpton v. Malcolmson* (L. R. 3 Ch. D. 568). See also *Neilson v. Harford* (1 W. P. C. 371); *Houshill Co. v. Neilson* (1 W. P. C. 692); *Edison & Swan Co. v. Woodhouse*, 2nd action (4 R. P. C. 108); *Moseley v. Victoria Rubber Co.* (4 R. P. C. 242); *Bray v. Gardner* (4 R. P. C. 406).

Where the specification under a patent for a chemical operation was concerned, *Mr. Justice Maule* said, ‘A competent workman must be taken to know the known properties of iodine, silver, and nitric acid, or else the specification should have included a statement of the properties of each of these substances.’ (*Beard v. Egerton*, 8 C. B. 165.)

But when placed in the hands of a person of ordinary skill and intelligence, ‘possessed of knowledge in the particular industry’ (*Badische Anilin und Soda Fabrik v. Levinstein*, L. R. 12 App. C. 710; 4 R. P. C. 463), the specification must be sufficient to show him how the invention is to be carried into effect without further assistance, and without needing large corrections or fresh invention on his part. There must be no necessity to try elaborate experiments in order to ascertain the meaning of the instrument or to accomplish

the end promised by the patentee. In *Rex v. Arkwright* (1 W. P. C. 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. In the luminous address of *Mr. Baron Alderson* to the jury on the trial of the case of *Morgan v. Seward* (1 W. P. C. 170) he said that a specification 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. . . . 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. And *Parke, B.*, in *Neilson v. Harford* (1 W. P. C. 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 *Rex 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. (*Neilson's Patent*, 1 W. P. C. 318, and see *Otto v. Linford*, 46 L. T. N. s. 39.) 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*, 2 W. P. C. 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. (1 W. P. C. 83.) 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.)

But when in the case of the *Edison & Swan Co. v. Holland* (6 R. P. C. 277) it was objected in the Court of Appeal that the specification did not sufficiently show how the invention was to be carried into effect, *L. J. Cotton* said, 'It is necessary that this should be done so as to be intelligible, and to enable the thing to be made without further invention—not, as was pressed upon us, by an ordinary workman, but by a person described by *Lord Ellenborough* in *Huddart v. Grimshaw* (1 W. P. C. 85-7) as a person skilled in the particular kind of work, or, as said by *Lord Loughborough* in *Arkwright v. Nightingale* (1 W. P. C. 60), a person conversant in the subject. But in my opinion it is not necessary that such a person should be able to do the work without any trial or experiment which, when it is new or especially delicate, may frequently be necessary however clear the description may be.'

In the case of *British Dynamite Company v. Krebs* (Goodeve's Cases, p. 88) the House of Lords reversed the decision of the Lords Justices of Appeal on the ground that the description of the mode of manufacture as set out in the specification had been conclusively proved to be sufficient for all practical purposes. The four law lords were unanimously of opinion that since it was shown in evidence that the patented article had been made by following the instructions of the specification, the Judges of the Court of Appeal ought not to have disregarded this, nor to have relied upon their own opinions that they, persons practically

unacquainted with the subject, would not have been able to manufacture the article without more instructions than the specification contained.

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* (1 W. P. C. 459) was for a method of manufacturing iron tubes without the use of a mandrel. The specification gave no directions as to leaving out the mandrel ; but it was held that an intelligent workman would sufficiently understand, from the purport of the specification, that a mandrel 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 not be necessary to interpose an operation at a certain stage in the process of daguerreotyping.

Again, in *Otto v. Linford* (46 L. T. n. s. 39) the specification under a patent for gas motor engines did not state the proportion of atmospheric air to be let into the chamber where the inflammable gas was fired with the view of producing a gradual in place of an explosive ignition. Nevertheless it was held that as exact proportions were not required to be mentioned, and as there was enough information in the specification to enable a maker of machinery to construct a working engine without exercising his inventive powers, the specification was sufficient.

It sometimes occurs that the drawing attached to the specification is erroneous in some particular, so that if an attempt were made to construct the machine by the drawing it could not be done, or if made it would not work. If, however, the text has correctly described the construction, or if the error is of a kind which an ordinary workman would easily perceive and rectify, requiring not experiments, but merely regulation, then the error in the figure will be

disregarded, and will not be held to vitiate the patent. (*Otto v. Linford*, 46 L. T. N. S. 35.)

*Combinations.*—It has been already stated (Chap. II.) that a number of 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. The combination may also comprise additions of a novel character along with old parts.

The treatment of a combination in a specification ought to have reference to the facts of the case and to the inventor's intentions in regard to what he wishes to secure by the patent. If he desires to protect a simple combination and nothing more, it is not necessary that he should distinguish old parts from new parts. It may be that all the parts are old, in which case he can only lay claim to their combination as being a new and useful invention. But it often happens that some of the constituent parts of the combination are also new and useful inventions. In such a case he has a right to protect them, but if he seeks to do so they ought to be specially pointed out, fully described, and expressly claimed. (See the section on the Claims.)

In the case of *Foxwell v. Bostock* (4 De G. J. and S. 298) 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, for a new combination. At the date of this patent many combinations of machinery, or, in other words, many machines for sewing or 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 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 the improvement, but which description 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.

Lord Westbury's language in *Foxwell v. Bostock* has given rise to much comment in later cases, and the decisions have been conflicting; but the Courts now refuse to understand it as deciding that where a combination is alone claimed it is necessary to distinguish the new parts from the old. It is now firmly established that where the only invention sought to be protected by the patent is the combination, and that is properly set forth, it is sufficiently described without separating new parts from old. Under the circumstances supposed, it can be of no moment, so far as the point before us is concerned, whether the parts are all old or partly old and partly new, and therefore a description of the parts and of the manner of arranging them into a working whole, followed by a claim restricted to the combination, will be a sufficient description of the invention.

Thus in *Harrison v. The Anderston Foundry Co.* (L. R. 1 App. C. 574) it was objected to the patentee's claim for a combination that he had not shown what was the novelty of the invention as he ought to have done according to the case of *Foxwell v. Bostock*; but *Lord Cairns, C.*, in giving judgment in the House of Lords said:—'If there is a patent for a combination, the combination itself is *ex necessitate* the novelty; and the combination is also the merit, if it be a merit, which remains to be proved, by evidence. So also with regard to the discrimination between what is new and what is old. If it is clear that the claim is for a combination and nothing but a combination, there is no infringement unless the whole combination is used, and it is in that way immaterial whether any and which of the parts are new.'

When the case of *Moore v. Bennett* (1 R. P. C. 142) was taken to the House of Lords, *Lord Selborne, C.*, and two other law lords overruled the unanimous decision of the three Lords Justices in the Court of Appeal (which had followed *Foxwell v. Bostock* too literally), and laid down the law to be that where the claim is for a new combination and not for particular subordinate things included in that combination, and where the manner of arriving at it and working it, and the purpose for which it is useful, are all sufficiently described in the specification, so that anyone acquainted with the subject will know in what respect it differs from the things that have gone before, it is unnecessary to go on to specify the subordinate parts of it as constituting new elements and a new thing, if a claim to subordinate parts as distinct from the entire combination is not intended to be made.

'When a combination and nothing more is claimed, the combination being a novelty, it is immaterial that the patentee should point out how far he claims for particular portions which go to make up the combination. Those portions are not his claim, but it is the putting them together and combining them that constitutes his claim. That seems to me to be the true law as laid down in

*Harrison v. The Anderston Foundry Co.*, without a reference to which case *Foxwell v. Bostock* ought not to be read; because it is possible to misread *Foxwell v. Bostock* unless you correct your impression of it afterwards by the judgment of the House of Lords in *Harrison v. The Anderston Foundry Co.*' (Per *L. J. Bowen* in *Proctor v. Bennis*, Court of Appeal, 4 R. P. C. 358. See also *Clark v. Adie*, L. R. 2 App. C. 328; *Watling v. Steven*, 3 R. P. C. 37; *Kaye v. Chubb*, 5 R. P. C. 649.)

When, however, an inventor's improvement of a complicated machine bears but a small proportion to the whole machine, it is highly desirable, if not imperative, that, if he ventures to claim the entire improved machine, he should not do so without distinctly pointing out the small addition or alteration which constitutes the improvement. In such a case Lord Westbury's quoted words may well be held to apply. In *Harrison v. The Anderston Foundry Co.* Lord Hatherley said in substance that it is not competent to a man to take a well-known existing machine and, having made some small improvement, to place that before the public, without explaining the improvement. 'You must state clearly and distinctly what it is in which you say you have made an improvement. To use an illustration which was adopted I think by L. J. James in another case (*Parke v. Stevens*, L. R. 8 Eq. 366), I think it will not do if you invented the gridiron pendulum to say "I have invented a better clock than anybody else," not telling the public what you have done to make it better than any other clock that is known.' Again, in *Moore v. Bennett* (1 R. P. C. 143), Lord Selborne, C., said, 'The case of *Foxwell v. Bostock* was qualified or explained in *Harrison v. Anderston Foundry Co.* . . . and so explained it appears to me to amount to no more than this: that when a claim is made for a general combination and arrangement of the different parts of a machine, if the Court sees that the combination is not new, but that there is some particular improvement in some particular part, it will not do to claim the whole combination as new, but you must condescend upon that which is

improved. For example, if a machine had been long in use in the brush trade and some particular improvement . . . had been made, the general combination remaining the same, then, according to the decision in *Foxwell v. Bostock*, by describing it as a new combination you would be misdescribing it, because, indeed, the thing discovered would be a particular improvement upon a particular part of that combination. And upon the principle that the specification should not be vague, but should give sufficient information, it ought not to disguise the real invention by a claim so wide that anyone would suppose something to be claimed as new which is not, but it should do it sufficiently and with proper precision.'

Having studied the rules previously propounded as those by which he ought to be chiefly guided in preparing his specification, the patentee may now be cautioned on the subject of certain faults, which, if committed, would have a disastrous effect upon its validity, and against which, therefore, he cannot be too vigilantly upon his guard.

*Ambiguity to be eschewed.*—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). A patent was obtained for arrangements for raising ships' anchors, and 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 chain cables 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 Queen's Bench, 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.' And *Mr. Justice Coleridge* added, 'If the specification on a fair interpretation be equivocal, it is insufficient.' The rule for a nonsuit was accordingly made absolute.

In *Turner v. Winter* (1 W. P. C. 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* (1 W. P. C. 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.

*Must not set forth two methods when only one is effective.*—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. (*Regina v. Cutler*, Macr. P. C. 137; *Beard v. Egerton*, 8 C. B. 165.)

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.' When the case went before the House of Lords, it was held, in affirmation of the view



taken by the Lord Chancellor, that on the construction of the whole specification two processes, a hot and a cold process, were described, and as it was proved that only the hot process was effective, the specification was declared to be 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,' it was said, 'would be to correct the specification by the superior intelligence of the reader.' (*Simpson v. Holliday*, 13 W. R. 577, affirmed L. R. 1 H. L. 315.)

*Must not contain misdirections or misrepresentations.*—If the specification contains language calculated to mislead in regard to an important part of the patented process, as where it contains positive misdirections as to the mode of operating, or as to the materials to be employed, the patent will likewise be void. 'You must not mislead people' (said *Jessel, M. R.*, in *Plimpton v. Malcolmson*, 3 L. R. Ch. D. 531, 576) 'by telling them to do something wrong, and leaving them to find out the mistake. . . . You must not give people mechanical problems and call them specifications.'

On the trial of *Palmer v. Wagstaff* (Newton's Lond. Journ. vol. xliii. p. 131), 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. Where a specification claimed the process of purifying sulphate of alumina by means of peroxide of manganese whether in the hydrated or anhydrous form, and it was proved that the use of the latter form was impracticable, the patent could not be sustained. *Kurtz v. Spence* (5 R. P. C. 184). See also *Savory v. Price* (1 Ry. and Moo. 1; 1 W. P. C. 83); *Bickford v. Skewes* (1 W. P. C. 218).

It may be inferred, from the case of *Huddart v. Grimshaw* (1 W. P. C. 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. Again, if anything is said to be immaterial which is in reality material, this will be a fatal defect. Thus, in *Neilson v. Harford* (1 W. P. C. 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, affirmed L. R. 1 H. L. 315).

Misrepresentations as to the object or capabilities of the invention, or as to other important matters, will deprive the inventor of the benefit of his patent. For instance, a patent was obtained for a machine for making paper in single sheets from one to twelve feet wide. It was proved that a single machine would make paper only of one definite width, and that if paper of some other width was required, another machine must be employed. It was held by the Court of K. B. that the capability of the machine had been misrepresented in an important respect, and that the patent was void. (*Bloxam v. Elsee*, 6 B. & C. 169.) And see *Crossley v. Potter* (Macr. P. C. 249). If the patented apparatus, as described, fails to effect what the inventor avers that it will effect, although it may do some

very small part of the proposed work, the patent is bad. (*Easterbrook v. Great Western Railway Company*, 2 R. P. C. 301.)

But on the trial of *Cole v. Saqui* (5 R. P. C. 494), an action for the infringement of a patent, the specification under which said in effect that the invention was capable of application to other purposes beyond that for which protection was claimed, but did not describe how those purposes were to be effected, Mr. Justice Kay held that this did not invalidate the patent. 'I can see no objection to a patentee stating in his specification that what he has invented with reference to one particular machine may be applied to other machines.'

*Technical and Scientific Terms.*—In making use of technical language great care should be taken that the words are employed in their true meanings, and in their proper significations. To give an example, a valuable patent was placed in jeopardy by the misuse of certain chemical terms in the specification. The inventor gave directions for using in the process for which he obtained his patent, hydro-carbon gas, carbon gas, and carbonic gas. Now, amongst chemists a hydro-carbon gas means a gas composed only of hydrogen and carbon; but the gas which the inventor had in view was one containing oxygen also, and therefore not a true hydro-carbon, which would not have effected his purpose. Again, his terms carbon gas and carbonic gas include carbonic acid gas and carbonic oxide, both of which were unsuitable. These were serious objections, and if the specification had been interpreted with the strictness with which some other specifications have been construed, the mistakes would have been held fatal; but a benign view of the matter was taken, and the objections were not allowed to prevail. (*Edison v. Woodhouse*, 3 R. P. C. 183.)

*Simple Mistakes.*—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 C. & P. 558 ; 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. Journ.* vol. xlii. 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 was said in the House of Lords that after a patent has stood enquiry and the test of time, the Courts do not encourage verbal objections to the form of the specification. (*Neilson v. Betts*, L. R. 5 H. L. 1.)

#### CLAIMS.

Before the passing of the Patents Act of 1883 it had become usual for patentees to insert at the close of their specifications certain clauses which were known as 'Claims.' The insertion of claiming clauses was not then prescribed by the law, but they offered the patentee an opportunity of summing up his invention, of setting forth in a brief form what he considered to be its pith and substance, and of protecting himself against the danger of being supposed to claim more than he desired to claim.

By the fifth subsection of the fifth section of the Act of 1883 it is directed that 'a complete specification must end with a distinct statement of the invention claimed.'

The import of these words was discussed in the case of *Siddell v. Vickers* (5 R. P. C. 416) ; one of the Lords Justices (p. 428) thought that 'distinct' means no more

than a claim independently of and apart from the description of the nature of the invention and of the way in which it is to be carried into effect. But the other two LL. JJ. were of opinion that the words 'distinct statement' mean more than a separate paragraph. They thought that the Legislature contemplated a distinct summary of the main features of the invention, something to which the reader might readily refer and from which he might learn without turning to the body of the specification what the characteristic features of the invention claimed were. They held that a claim which referred to a combination of parts for effecting a certain purpose 'as hereinbefore set forth' did not satisfy the requirement of the Act. However, all three Judges were of opinion that the words of the subsection are merely directory, and that non-compliance with this direction does not invalidate the patent (pp. 429, 432, 433).

Under the old law all the claiming clauses might be struck out of the specification by disclaimer, if there remained sufficient in the specification to show distinctly what the invention was. (*Thomas v. Welch*, L. R. 1 C. P. 192.) But this cannot now be done, since the Act of 1883 requires every specification to end with a claim.

Some patentees introduce a large number of claims into their specifications, but this is a dangerous practice, for the risks are proportionately increased. In one of Mr. Edison's patents there were no fewer than thirty claims, all of which except one were afterwards struck out by successive disclaimers.

*Everything not claimed is impliedly disclaimed.*—Whilst a claim is primarily intended to mark off what the inventor conceives to be his exclusive property and to warn the public not to trespass within the fence he has set up, it practically operates also as a disclaimer of everything described in the specification except what is expressly claimed. (*Harrison v. Anderston Foundry Company*, L. R. 1 App. Cas. 574.) This ought to be kept in mind by the inventor when he is preparing this part of his specification, and

he should be careful neither on the one hand to include matters that are beyond the boundary of the invention nor on the other to restrict his rights within too narrow limits by leaving out what he might have claimed. In the latter case the patentee is exposed to defeat if he brings an action against some one who has made use of that which he omitted to claim. (*Jackson v. Wolstenhulmes*, 1 R. P. C. 105; *Fairburn v. Household*, Court of Appeal 3 R. P. C. 263.)

‘The real object of what is called a claim’ (said *James, L. J.*, in *Plimpton v. Spiller*, L. R. 6 Ch. D. 412, 426) ‘is not to claim anything which is not mentioned by the specification, but to disclaim something. A man who has invented something gives in detail the whole of the machine in his specification. In doing that he is of necessity very frequently obliged to give details of things which are perfectly well known and in common use; he describes new combinations of old things to produce a new result, or something of that kind. Therefore, having described his invention and the mode of carrying that invention into effect, by way of security he says, “But take notice I do not claim the whole of that machine; I do not claim the whole of that *modus operandi*, but that which is new, and that which I claim, is that which I am now about to state.” That really is the legitimate object of a claim, and you must always construe a claim with reference to the whole context of a specification.’

‘It has long been the practice’ (said *Jessel, M. R.*, in *Hinks v. Safety Lighting Company*, 4 Ch. D. 607) ‘to insert in specifications the distinct claim of what is said to be comprised in the patent; meaning that nothing else is comprised, that everything else is thrown open to the public; or, to put it into other words, if a man has described in his specification a dozen new inventions of the most useful character, but has chosen to confine his claim to one, he has given to the public the other eleven.’

*Claims ought to show clearly what is intended to be claimed.*—Particular attention should be given to the framing of the claims so that it may be seen without difficulty

what it is the inventor wishes to secure. Where a specification was so worded that it was not clear whether the patentee intended to claim a novel combination of parts, or the parts themselves, some or all of which were old, the patent was held to be invalid. (*Rowcliffe v. Morris*, 3 R. P. C. 17, and see *Fairburn v. Household*, 3 R. P. C. 263.)

A claim for a combination will not be deemed too vague when there is proof that a competent workman can make the combination from the specification without experiment. (*Edison & Swan United Electric Light Co. v. Woodhouse*, 4 R. P. C. 92.)

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, and on another hearing, L. R. 3 Eq. 497.) See also *Russell v. Cowley* (1 W. P. C. 465); *Thomas v. Welch* (L. R. 1 C. P. 192).

In *Kay v. Marshall* (2 W. P. C. 39), *Cottenham, C.*, said, '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 description 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); and *Easterbrook v. G. W. R. Co.* (2 R. P. C. 208).

*If all the parts are old only the combination should be claimed.*—If all the parts of an invention, taken separately, are old, the patent being obtained only for a novel combination of them, the patentee, in preparing the specification for such an invention, must take care to limit his claim to the new combination. (*Lister v. Leather*, 3 Jur. n. s. 811; S. C. in error, 8 E. & B. 1004; *Seed v. Higgins*, 8 H. L.

C. 550; *Potter v. Parr*, 2 B. & S. 259; *Kay v. Marshall*, 2 W. P. C. 71.)

Tetley's patent was for improvements in machinery for raising and impelling water. The specification described a great number of mechanical contrivances for effecting 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 plaintiff afterwards 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. 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 *Mr. Justice 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 of C. P. 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. (*Tetley v. Easton*, Macr. P. C. 48; 2 C. B. n. s. 706.)

*New parts and minor combinations must be expressly claimed.*—Where a patentee claims in his specification an entire combination only, he will be deemed not to have claimed any of the novel minor combinations if any such there be. A combination of three parts is a different thing from a combination of two of them; and if a patentee desires to secure the minor combination he must distinctly claim it. (*Clark v. Adie*, L. R. 10 Ch. 667; affirmed on appeal, L. R. 2 App. Cas. 315.)

With respect to patents granted before the Act of 1883 came into operation, it was held in *Nordenfeldt v. Gardner* (1 R. P. C. 69), when the patent was for an improvement consisting of an addition to an old mechanical combination, that as the improvement was made clearly manifest on the face of the specification, where it was sufficiently pointed out what the improvement was, the patent was not invalid although there was no mention of the improvement in the claims. On the other hand, where a patentee had omitted from his claim a process which was properly described in the body of the specification, an action brought by him for the infringement of the process was dismissed. (*Jackson v. Wolstenhulmes*, 1 R. P. C. 105.)

*The claims must not cover too much.*—The inventor should beware of claiming more than he is strictly entitled to, since a failure in part is a failure altogether, and that to which he has a just right 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. (*Hill v. Thompson*, 1 W. P. C. 247.)

Therefore, if an inventor lays claim to a principle in addition to a method of carrying it into effect, and it should turn out that the principle was known and had been previously applied to a similar purpose, in such case the patent cannot stand.

In the specification under the patent which formed the ground of dispute in *Hill v. Thompson* (1 W. P. C. 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 counter-balance 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. (*Minton v. Mower*, 1 W. P. C. 138.)

Under a patent for improvements in stoves the specification claimed the construction of stoves made in such a manner that the fuel should be introduced from beneath. Now it was shown at the trial of an action of *scire facias* that grates had been previously constructed on this principle; and although the particular method of effecting the

object was new, yet *Lord Ellenborough* held that as the patentee had claimed the principle, which was not new, the patent was bad. If the inventor had limited his claim to his own mode of carrying the principle into effect his patent would have been upheld. (*Rex v. Cutler*, 1 Stark. 354, 1 W. P. C. 76.)

The case of *Rex v. Elsc* (1 W. P. C. 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 material 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.

Fisher and Gibbons obtained a patent in 1844 for an invention of a machine in which a shuttle was combined with a needle for producing stitches to ornament fabrics. In 1846 Thomas procured a patent for improvements in machinery for sewing and stitching various fabrics. His specification was construed as claiming generally the use of needles in combination with shuttles for producing stitches; and although he showed one particular form of a needle and shuttle machine which was a different combination from that described by Fisher and Gibbons, it was held that, having regard to the language employed, his claim could not be confined to that particular combination. His patent was, therefore, invalid in consequence of the patentee claiming too much. (*Thomas v. Foxwell*, 5 Jur. N. S. 37; 6 Jur. N. S. 271.)

Under a patent for improvements in weaving figured fabrics, the specification described mechanism for weaving coach lace, but the patentee said that he did not confine himself to narrow goods only, as his improvements were applicable to the production of carpets. It was shown that the specified mechanism could not be adapted to the weaving of carpets by merely enlarging it, but required certain

additions to be made to it before it could be employed for that purpose. *Sir F. Pollock, C. B.*, told the jury, at the trial of an action for an infringement, that if carpets could not be made by the means stated in the specification, the patent was not good ; and the jury returned a verdict in favour of the defendant. (*Crossley v. Potter*, Macr. P. C. 240.)

So likewise if a specification claims a novel combination of parts forming an entire machine, and also makes a claim to a subordinate combination which is not new, the patent cannot stand. (*Cropper v. Smith*, 1 R. P. C. 81.)

Under a patent for an invention for constructing belts for driving machinery the specification claimed to make belts of that class of cotton canvas which was known in the market as hard woven canvas. Now it was proved that there were ten qualities of such canvas in the market, and that at the most three of them would answer the purpose. In the absence of evidence that an ordinary workman would know which quality to select without trying experiments, it was held by the Court of Appeal that the specification claimed too much. (*Gandy v. Reddaway*, 2 R. P. C. 49.)

A specification claimed the use of all peroxides of manganese for a given purpose, but it was shown that only the hydrated peroxide would have the desired effect, and the patent was therefore declared to be invalid. (*Kurtz v. Spence*, 5 R. P. C. 161.) See also *Ralston v. Smith* (9 C. B. N. S. 117; 11 C. B. N. S. 471; 11 H. L. Cas. 223); *Booth v. Kennard* (2 H. & N. 84); *Saunders v. Aston* (13 B. & Ad. 886; 1 W. P. C. 75 n.); and *Haworth v. Hardcastle* (1 W. P. C. 484.)

We must not forget, however, the remarks made by *Jessel, M. R.*, in the case of *Frearson v. Loe* (L. R. 9 Ch. D. 58) : 'It does not follow that because an inventor thinks he has invented more than he has in fact, and describes the advantages of his invention, and some of these advantages arise from an old portion of the invention, it may not still be a good patent, provided that the invention as claimed is so limited as to fail to cover the actual thing in use, while

it covers some of the advantages mentioned ; in such a case it may still no doubt be a good patent.'

*Vague, speculative claims to be avoided.*—A patentee will not be allowed to make wide hypothetical or speculative claims based on mere conjecture or surmise, nor will his patent be permitted to cover 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 (*Tetley v. Easton*, Macr. P. C. 48), remarked upon this passage, that, in point of law, the patentee had no right to make such a claim ; 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* (2 W. P. C. 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.

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 *Pollock, C. B.*, 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.’

In the case of *Arnold v. Bradbury* (L. R. 6 Ch. 706) *Lord Hatherley, C.*, said that a claim must be very large and vague indeed to justify any court in saying, independently of evidence, that it is impossible to sustain a patent based upon it. In that case he decided that the claims for making ruffles ‘by machinery’ meant by the described machinery, and that there was no ground for holding that the claims were too large *per se*. In the course of his

judgment, he remarked that it was a singular fact that no case had been cited from the law books of any claim being held to be too large on account of the greatness of the claim independently of external evidence. But he referred to an American case (*Wyatt v. Stone*, 1 Storey 273) where the patentee had claimed every method of cutting ice by machinery.

## CHAPTER X.

## ON THE INTERPRETATION OF SPECIFICATIONS.

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. The judges were then astute to detect flaws in specifications, to the language of which they were accustomed to apply a rigorous criticism. Then came a change, and some of the judges thought that a specification ought to be read with indulgence; that a liberal construction should be put upon it, and that the words should receive a benign or a benevolent interpretation. But of late years the Courts have laid down that specifications are to be construed like other written documents, that is, with a disposition to read them fairly, and with an endeavour to ascertain their real meaning, not straining the language nor giving effect to petty objections. In the case of *Newton v. Halbard* (Hil. Term, 1872) *Mr. Justice Grove* said, 'A specification should not be construed in a technical or captious spirit, but with a fair intention to give it effect if it be reasonably intelligible.' In the case of *Harrison v. The Anderston Foundry Company* (L. R. 1 App. Cas. 574) *Lord Chelmsford* said, 'In the construction of a specification it appears to me that it ought not to be subjected to what has been called a benign interpretation, or to a strict one. The language should be construed according to its ordinary meaning, the understanding of technical words being, of course, confined to those who are conversant with the subject-matter of the invention.' 'I am



anxious' (said *Sir G. Jessel, M. R.*, in *Hinks v. Safety Lighting Company*, L. R. 4 Ch. D. 607), 'as I believe every judge is who knows anything of patent law, to support honest *bonâ-fide* inventors who have actually invented something novel and useful, and to prevent their patents from being overturned on mere technical objections or on mere cavillings with the language of the specification, so as to deprive the inventor of the benefit of his invention. This is sometimes called a "benevolent" mode of construction. Perhaps that is not the best term to use, but it may be described as construing a specification fairly, with a judicial anxiety to support a really useful invention, if it can be supported on a reasonable construction of the patent.' See also the remarks of the same learned judge, and of *Brett, L. J.*, in *Plimpton v. Spiller* (L. R. 6 Ch. D. 412). Also the observations of *Sir G. Jessel, M. R.*, in *Otto v. Linford* (Court of App. 46 L. T. N. S. 35). In *Dudgeon v. Thomson* (L. R. 3 App. Cas. 53), *Lord Blackburn* said, 'I apprehend the duty of the Court is fairly and truly to construe the specification, neither favouring the one side nor the other; neither putting an unfair gloss or construction upon the specification for the purpose of saving a patent, nor in order to extend it.'

The same learned judge, in *Clark v. Adie* (L. R. 2 App. Cas. 423), said, 'In construing the specification we must construe it like all written documents, taking the words and seeing what is the meaning of those words when applied to the subject-matter; and in the case of a specification which is addressed, not to the world at large, but to a particular class, namely, skilled mechanics possessing a certain amount of knowledge, it is material for the tribunal to put itself in the position of such a class, . . . and by the admission of evidence or otherwise put itself in a position to understand and then to say what the words of the specification mean when applied to such a subject-matter.' In delivering the judgment of the Court of Appeal in the same case (L. R. 3 Ch. D. 142), *L. J. James* said, 'It cannot be effectually contended that there is any principle to be applied

to the construction of specifications which differs from that applicable to the construction of every written instrument whatever. Of course, in ascertaining the meaning of words used, you endeavour to put yourself as much as possible in the position of the person using them.' (See also *Simpson v. Holliday*, 13 W. R. 577, S. C. L. R. 1 H. L. 315; *Edison and Swan Electric Light Co. v. Holland*, 5 R. P. C. 474.)

'A specification' (said *Mr. Justice Fry* in *Wegmann v. Corcoran*, L. R. 13 Ch. D. 77) 'ought to be read as a whole, and with the view of ascertaining whether it fairly and honestly and with sufficient exactitude describes the invention.' And in *Plimpton v. Spiller* (L. R. 6 Ch. D. 412) *L. J. James* said, 'You must always construe a claim with reference to the whole context of a specification.'

'If any patent is capable of more constructions than one, the general rule would be applied that you would put upon it that construction which makes it a valid patent, rather than a construction which renders it invalid.' (Per *L. J. Lindley* in *Needham v. Johnson*, 1 R. P. C. 58.) 'We ought if possible to construe a claim so as to support a patent.' (Per *Sir B. Brett*, S. C. 55.)

As to the interpretation of old specifications which are brought forward to prove anticipation, there is the important case of *Betts v. Menzies*, in the House of Lords (10 H. L. C. 117), 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 say 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 cannot be decided without hearing evidence on the point, and if the case is tried before a jury it is a

fact for their decision. And in a subsequent case on the same patent, *Sir W. P. Wood, V. C.*, appears to have considered that it is no ground of proof of the effect of a long anterior patent that scientific persons of the present day, with all the superior knowledge obtained by the advance of science, depose that they could produce the same results by the process disclosed by the earlier patent, as that described in the subsequent one. (*Betts v. De Vitre*, 11 L. T. N. S. 445.)

Where there is doubt as to the meaning of particular expressions, 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 for the purpose of correcting mistakes in it. (*Neilson v. Harford*, 1 W. P. C. 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. (See *C. J. Tindal's* remarks in *Walton v. Potter*, 1 W. P. C. 595.)

In examining a specification with the view of ascertaining its sufficiency, the Court will not take into consideration what the patentee says he thought of, meant, or intended at the time he prepared it. The Court will notice only what the ordinary workman says. *Kaye v. Chubb* (4 R. P. C. 289).

Although a tribunal will look with extreme jealousy at any attempt on the part of a patentee to derogate from his own grant after he has assigned the patent, yet in construing the specification the language must not be forced from its true meaning in order to avoid imposing a hardship on the assignee. (*Hocking v. Hocking*, House of Lords, 6 R. P. C. 75.)

It must be borne in mind that a specification will be construed with reference to the state of knowledge at the time it was prepared. Thus, the specification under a patent for a chemical invention will be held to refer to what was known at the time, and not to anything which was discovered subsequently. The language will not be deemed too wide because it is extensive enough to embrace unsuitable ingredients of later discovery. As a patentee would not be allowed to secure the exclusive use of materials unknown at the date of the patent, although the words of the specification are sufficiently ample to cover them, it would be manifestly unjust to hold that his language, having become applicable by the advance of knowledge to more than he contemplated, should render the patent void, if it was properly limited and accurate at the time it was employed.

In 1878 a patent was obtained for certain methods of preparing colouring matters from naphthylamine, a substance derived from one of the products of the distillation of coal. In an action for infringing the patent the defendant contended that as two substances named naphthylamine (viz. the alpha and beta forms) were known to chemists at the date of the patent, one of which would not answer the purpose, the specification was insufficient by reason of its not stating which of the two was to be used. But it was held by the judge who tried the action, and by the House of Lords, that as the alpha form (the suitable one) was the only one in the market at the date of the patent, the beta form being a costly substance known only to a few chemists as a laboratory product, the specification was sufficiently explicit. (*Badische Anilin und Soda Fabrik v. Levinstein*, 2 R. P. C. 73; S. C. House of Lords, 4 R. P. C. 463.) See also *Crossley v. Beverley* (3 C. & P. 515).

Where a specification has received an interpretation in the Court of Appeal and afterwards goes there again on appeal from the decision in another action against another defendant, the construction previously put upon it will be adopted and will not be allowed to be questioned. (*Auto-*