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THE LAW AND PRACTICE

RELATING TO

LETTERS PATENT FOR
INVENTIONS

BY

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SIXTH EDITION

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PREFACE TO THE SIXTH EDITION.

NEARLY twelve years have elapsed since the fifth edition of this work appeared. During that period the Statute Law has been amended by the Act of 1919, and by Acts and Rules which have resulted from the Great War and Treaties of Peace. General principles have been re-stated by experienced Judges, by Lord Moulton and Lord Parker in particular, to suit modern requirements.

It has been necessary, therefore, to rearrange and rewrite a greater part of the book. A new chapter has been added on War and Peace Legislation; much of the Law on this subject must be a matter of speculation, but we have endeavoured to deal, in anticipation of authoritative decisions, with some of the many difficulties caused by the necessity of expressing in a single document the least common measure of many and different requirements arising from the diverse legal systems and policies of the numerous parties to the Treaty. The "Vesting Order" of October 30, 1918, makes its first public appearance at the end of this chapter.

Patent Law is peculiarly rich in cases, because all Patent Cases are officially reported, and for the same reason text-books tend to become overloaded with references. From the last edition many obsolete cases have been removed; we have retained only those which are still useful, and have substituted for those removed many newer decisions in which fundamental principles have received modern expression. All case references have been carefully checked and the Index has been amplified.

Stamp Duties, Income Tax, and Excess Profits Duty, as

affecting Patent rights and property, are now dealt with for the first time.

The Appendix has been revised, and the Act of 1907, as printed, incorporates the amendments effected by the Act of 1919.

We desire to express our thanks to Mr. A. J. Martin and other Officials of the Patent Office for valuable suggestions and help, but we are entirely responsible for the opinions and anticipations of Official decisions expressed herein.

C. T.

A. J.

NEW COURT, TEMPLE,
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January, 1921.

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THE LAW AND PRACTICE

RELATING TO

LETTERS PATENT FOR INVENTIONS.

CHAPTER I.

LETTERS PATENT.

“LETTERS PATENT” is the name given to the document in which the sovereign signifies his will to confer special rights or privileges upon a subject. The privileges granted to any one when created a peer of the realm or the monopoly of a trade or manufacture are alike conferred by the grant to him of letters patent.

An exhaustive account of the early history of the law ^{History of the law.} would be out of place in a text-book intended for the use of practitioners. The following summary may however serve as an introduction to an account of modern legislation.

It appears to have been recognised as part of the Common Law Prerogative from the earliest times, that the Crown might grant to any one, be he a subject or an alien, a monopoly of a new trade or manufacture provided that the grantee of the monopoly had done something (such as inventing the manufacture or bringing it from abroad or spending much time and money on its development) to merit such a reward. In the days of the Tudor Sovereigns this prerogative was abused, and monopolies were granted to Court favourites without any pretence of merit. The famous “*Case of Monopolies*,” otherwise *Darcy v. Allein* (a), argued in the last year of Elizabeth’s reign

(a) Mr. Gordon’s book, “*Monopolies by Patents*,” Stevens & Sons, 1897, contains a most carefully edited report of this great case, collated

and decided in the first year of the reign of James I., marks the first serious sign of re-action against the growing abuse. The queen had granted to the plaintiff a monopoly of the right of making and trading in playing cards, and he sued the defendant for infringement. The Court of King's Bench, relying upon the courtly doctrine that the Crown could never have intended to make a grant, the effect of which would be injurious to the Realm, decided that the grant sued on was restrictive of trade and industry, and was therefore void.

In the year 1610 King James I. issued his Declaration or "Book of Bounty," which set forth "monopolies" as the first of those "special things for which we expressly command that no suitor presume to move us" and as "Things contrary to Our Laws," but reserved in "a memorial of those suits wherein we are contented to be moved by our servants and subjects, and to reward them according to the particular merit of the suitor," *inter alia* "Projects of new invention so they be not contrary to the Law, nor mischievous to the State, by raising prices of commodities at home, or hurt of trade, or otherwise inconvenient." The language of the king was followed in the Statute of Monopolies, 21 Ja. I. c. 3, enacted in 1623, which recited the royal declaration, declared all monopolies and dispensations void, enacted that the validity of all monopolies and grants should be tried according to the Common Law, and after excepting any letters patent and grants of privilege "heretofore made of the sole working and making of any manner of new manufacture within this Realm to the true inventor or inventor of such manufactures which others at the time of making of such letters patent and grants did not use" (b) by the famous 6th section laid down the foundation of modern patent law as follows:—

"Provided also (and be it declared and enacted) (c) that any declaration before-mentioned shall not extend to any letters patents and grants of privilege for the term of fourteen years

from all available contemporary sources, and is the best authority upon the history of the early law.

(b) Sect. 5.

(c) Words in brackets repealed by the S. L. R. Act, 1888, 51 Vict. c. 3, s. 1, Sched., Part I.

or under, hereafter to be made of the sole working or making of any manner of new manufactures (*d*) within this Realm, to the true and first inventor and inventors of such manufactures, which others at the time of making such letters patents and grants shall not use, so as also they be not contrary to the law nor mischievous to the State (*e*), by raising prices or commodities at home, or hurt of trade, or generally inconvenient" (*f*).

It will be seen that the Statute of Monopolies creates no statutory rights, but merely saves the common law rights of the Crown; and by sect. 97 of the Patents and Designs Act, 1907, it is enacted: "*Nothing in this Act shall take away, abridge or prejudicially affect the prerogative of the Crown in relation to the granting of any letters patent, or to the withholding of the grant thereof.*" By sect. 93 of the same Act the word "*invention*" is defined as meaning "*any manner of new manufacture the subject of letters patent and grant of privilege within section six of the Statute of Monopolies . . . and includes an alleged invention.*" Definition of "invention" still retained.

So it is that in the present day, notwithstanding the various statutes which have been passed in relation to letters patent for inventions, these monopolies are still granted upon the mere motion of the sovereign, in the exercise of his royal prerogative, and that all that has been done has been declaratory of the limits within which that prerogative should be exercised, and of the method of procedure to be adopted in obtaining letters patent for inventions.

For the purpose of supporting the validity of the letters patent it is necessary that the patentee should conform to certain requisites, and these requisites are indicated in the 6th section of the Statute of Monopolies.

Firstly, he must be the true and first inventor of—

Secondly, a new manufacture;

Thirdly, the new manufacture must not be contrary to law, nor must it be mischievous to the State, by raising the prices

(*d*) See chapters entitled "Novelty" and "Subject-Matter."

(*e*) See Chapters III. and VIII.

(*f*) See Chapter XIII.

of commodities at home; it must not be hurtful to trade, nor generally inconvenient.

The Acts of 1883 and 1907 successively adopted this definition of an invention, and anything that does not conform with all these requisites is not entitled to be called an invention. The host of important decided cases as to the construction of the 6th section of the Statute of Monopolies, and the enormous expense, and labour and learning, which have been devoted to obtaining these decisions, no doubt induced the legislature to adopt a definition which had in some respects obtained a correct judicial meaning; but it is doubtful whether it was wise to re-enact it in a form which had, we may say, centuries ago, already become to some extent obsolete.

In the case of *The Badische Anilin und Soda Fabrik v. Thompson* (21 R. P. C. 473) it was argued that the patent should be declared void, because it had never been the intention of the patentee to manufacture in this country, and by means of his patent he maintained a very high price in this country for the article which he manufactured in Belgium. It was urged that this was contrary to sect. 6 of the Statute of Monopolies and to the condition recited in the letters patent. It was held that no condition was imposed by law that the manufacture should be carried on in this country, and that in the particular circumstances the evidence had not established that the price maintained was excessive. No opinion was expressed on the question of law as to the effect on the validity of the patent if the evidence had satisfied the Court that excessive prices had in fact been maintained.

The Act of 1907, as amended by the Act of 1919, however, imposed obligations of this kind, which will be considered in Chap. XIII.

The definition of "new manufacture," and the construction which is to be placed upon the word "*invention*," will have to be dealt with hereafter, in the Chapters entitled "Novelty" and "Subject-matter."

Thus we see that the same essentials must be proved to-day by an applicant for the grant of letters patent as were necessary at the date of the Statute of Monopolies; he must be the first

to introduce into this realm the manufacture for which he seeks a patent, whether by enterprise in importing it from abroad, or by the exercise of his own inventive faculty. The Patents and Designs Act, 1907, as amended by the Act of 1919, consolidates all the previous enactments and will be dealt with in detail in the course of the consideration of the various branches of the subject as they arise. The Patents Act of 1907 consolidates the law.

Prior to the Act of 1883 letters patent were issued under the great seal of England, and, consequently, by the Lord Chancellor as keeper of the great seal. The process of sealing a patent was attended by all the formalities and expense which surround an important act of State. Letters patent derived their authority from the fact that the great seal was attached to them, "for all the king's subjects are bound to take notice of the king's great seal" (g). Sect. 14 (1) of the Act of 1907 enacts: "*A patent sealed with the seal of the Patent Office shall have the same effect as if it were sealed with the great seal of the United Kingdom, and shall have effect throughout the United Kingdom and the Isle of Man.*" And sect. 64, "*Impressions of the seal of the Patent Office shall be judicially noticed and admitted in evidence.*" The seal of the Patent Office.

THE LETTERS PATENT.

Form D in the first schedule to the Act of 1883 gave the form in which letters patent were to be issued, which has since been modified (h). By sect. 14, sub-sect. 2, it is enacted, "*Every patent may be in the prescribed form . . .*" The form of a patent.

Letters patent, as issued at the present time, consist of six material parts:—

- 1st. The address.
- 2nd. The recitals.
- 3rd. The grant.
- 4th. The prohibition.
- 5th. The provisoes.
- 6th. The construction of the grant.

(g) *East India Co. v. Sandys*, Skin. 225. (h) See Appendix.

THE ADDRESS.

The address is a public address from the sovereign to "all to whom these presents shall come." Hindmarch gives the reason for this as being, that it contains bargains made between the public and patentee.

THE RECITALS.

Recitals contain suggestions

The recitals are four in number. The first recites the patentee's name and address, that he has made a declaration that he is in possession of an invention and is followed by the title of the invention. That he has declared that he is the true and first inventor of the invention, and that the same is not in use by any other person to the best of his knowledge and belief.

which must be true.

These are the so-called "suggestions" which are supposed to have been made to the sovereign prior to the patent being granted and are the representations upon which it has been granted. If either of these suggestions be untrue the patent is void.

The second recital deals with the prayer of the application for the grant.

The third recital recites that a complete specification has been filed, particularly describing the nature of the invention. Here, again, a false suggestion will avoid the patent, so that if the complete specification is imperfect, the patent will be void upon two grounds, the one being the failure of consideration, and the other false suggestion; and a false suggestion is equally fatal whether it is wilfully false or otherwise.

The fourth recital gives the common law motive for the grant, which is the encouragement of inventions for the public good. There will be something analogous to a false suggestion if the subject-matter of the patent be immoral or illegal, and hence the patent will at common law be void. By sect. 75 of the Act the comptroller may refuse to grant a patent for an invention of which the use would, in his opinion, be contrary to law or morality.

The requirements as to novelty, utility, subject-matter, and

disclosure of the invention in the specifications will be considered in detail in subsequent chapters, but they are all based on the "suggestions" contained in these recitals.

THE GRANT.

"Know ye, therefore, that We of our especial grace, certain knowledge, and mere motion do by these presents, for us, &c., give and grant unto the said patentee our especial licence, full power, sole privilege, and authority, that the said patentee by himself, his agents, or licensees, and no others, may at all times hereafter during the term of years herein mentioned, make, use, exercise and vend the said invention . . . in such manner as to him or them may seem meet, and that the said patentee shall have and enjoy the whole profit and advantage from time to time accruing by reason of the said invention, during the term of sixteen years from the date hereunder written of these presents."

The monopoly grant.

This language is intended to preserve intact the royal prerogative to grant or withhold a patent—which right was by the common law absolute and undoubted. We have seen that this prerogative is carefully preserved by sect. 97 of the Act.

It is the granting portion of the letters patent which creates the property in the invention. We have seen that this species of property is purely artificial in its nature; it is the most equitable and natural method which the State can devise for the reward and encouragement of inventors. A trade mark is also an exclusive right, but it differs from a patent, inasmuch that it has not merit and the benefit of mankind as its consideration. Its object is to indicate the source from which an article comes; not to restrain others from manufacturing such articles. It merely prevents them from using the mark in connection with particular goods. A patent prevents the public from making the article or using the invention, and does not confer upon the patentee a right to manufacture according to his invention. That is a right which he would equally effectively have if there were no letters patent at all—only in that case all the world would equally have the right. What the letters patent confer is the right to exclude others from manufacturing in a

Nature of patent right.

differs from trade mark.

Is a chose in action.

particular way, and using a particular invention. Accordingly a patentee's right is a chose in action and entirely distinct from the right of property in a chattel, and so comes within sect. 35 of the Trustee Act, 1893, and is incapable of seizure so that it cannot be taken under a writ of *fi. fa.* (i).

It was held in *Edwards v. Picard* (1909, 2 K. B. 903), by the Court of Appeal, that a receiver could not be appointed to receive royalties under patents towards satisfaction of a judgment.

No property
in mere
secret.

There is no property which partakes of the nature of an exclusive right save that of a patent, copyright, or trade mark. There is no exclusive right in a secret. A man may only use a secret to his own profit so long as no one is in a position, by reason of knowing the secret, to use it. But the original possessor of a secret of manufacture cannot, apart from contract express or implied (j), by any process of law, prevent a person from acquiring the knowledge of his secret, or, having acquired it, from making such use of it, by publication or otherwise, as he may think proper (k).

If the plaintiff's secret, however, be one which he intends to patent, and the defendant has acquired the information during the progress of experiments, or from the confidence of the plaintiff, he will not be allowed to make such use of the knowledge so acquired as subsequently to invalidate the plaintiff's patent, or to take out a patent for the invention himself (l), and if he does so, he will be liable in damages to the plaintiff (m).

It will be observed that the word "patentee" is used in the grant; the old form was, "to the said John Smith, his executors, administrators or assigns;" a "patentee" is, under the 93rd section, as amended by the Act of 1919, construed as being "*the person for the time being entered on the*

(i) *British Mutoscope Co. v. Homer*, 18 R. P. C. 177; *Heath's Patent*, 29 R. P. C. 389; *Steers v. Rogers*, 10 R. P. C. 245.

(j) As in *The Amber Size and Chemical Co., Ltd. v. Menzel*, 1913, 2 Ch. 239, and *Alperton Rubler Co. v. Manning*, 33 T. L. R. 205; 116 L. T. 499.

(k) *Canham v. Jones*, 2 Vcs. & B. 218; *James v. James*, L. R. 13 Eq. 421; *Massam v. Thorley's Cattle Food Co.*, 6 C. D. 574.

(l) See sect. 15 of the Act of 1907.

(m) *Smith v. Dickenson*, 3 B. & P. 630.

register as the grantee or proprietor of the patent ;" we shall see presently that this includes assignees, executors and administrators, together with receivers and trustees in bankruptcy, but the subject of the devolution of patent rights is too extensive and important to be dealt with under this head.

THE PROHIBITION.

The prohibition in the patent commands "all our subjects, ^{The prohibition.} that they do not at any time during the continuance of the said term of sixteen (n) years either directly or indirectly make use or put in practice the said invention, or any part of the same, nor in anywise imitate the same, nor make or cause to be made any addition thereto or subtraction therefrom, whereby to pretend themselves the inventors thereof, without the consent, licence or agreement of the said patentee in writing under his hand and seal, on pain of incurring such penalties as may be justly inflicted on such offenders for their contempt of this our royal command, and of being answerable to the patentee according to law for his damages thereby occasioned."

The period includes the day of issue and dates from it (o).

It is very difficult to understand the form of letters patent which was appended to the Act of 1883, and since substantially followed. It is presumed that the Act was intended to amend, simplify and codify the law of patents. The form above quoted is an imitation of forms previously in use. It is not easy to understand what the "penalties" referred to in the prohibition are, and how they are to be put in force or recovered. The Act certainly does not mention penalties as a form of punishment for infringers.

THE PROVISOS.

"Provided always that these letters patent shall be revocable ^{Proviso for revocation.} on any of the grounds from time to time by law prescribed as

(n) *Sixteen* substituted by the 1919, or which might thereafter come into force.
 (o) *Russell v. Leddam*, 14 M. & W. 574.

grounds for revoking letters patent granted by us and the same may be revoked and made void accordingly" (see Chapters XIII. and XIV.).

The next proviso is one for the determination of the patent in the event of the prescribed fees not being paid (*p*), and the last provides for the supply of the patented article for the use of the public service on reasonable terms.

The rights of the Crown and of contractors under Government Departments are dealt with in Chapter XV.

THE CONSTRUCTION.

Construction
of patent.

"And lastly, we do by these presents for us, our heirs and successors, grant unto the said patentee that these our letters patent shall be construed in the most beneficial sense for the advantage of the said patentee." The meaning of these words is obscure, but they are not inserted in the patent for the purpose of ousting the common rule of construction of grants of the Crown that they shall be read most strongly against the grantee. It would appear that they are a survival of the form which was in use when a patent was granted on an application accompanied by the "title" of the invention only, and have no significance to-day (*q*). In any case this "favourable construction" applies only to the letters patent and not to the specification.

Form of
patent of
addition.

The form of a "Patent of Addition," created by the Act of 1907, resembles that of an ordinary patent in all particulars material to the questions hitherto discussed (*r*).

Modern Patent Law is regulated by the Act of 1907, as amended by the Acts of 1914 and 1919, the Partial Suspension Act of 1915, the Patents Rules, the Law Officers Rules, the Rules of the Supreme Court Order LIII A, and the Acts and Orders giving effect to the Treaties of Peace.

(*p*) See the Act of 1907, s. 20, as to restoration of patents which have lapsed for this reason.

(*q*) See *Feather v. R.*, 6 B. & S. at p. 287.

(*r*) See Appendix.

CHAPTER II.

THE GRANTEE.

By sect. 1, sub-sect. 1, of the Act of 1907, "*An application for a patent may be made by any person who claims to be the true and first inventor of an invention, whether he is a British subject or not, and whether alone or jointly with another person.*" Who may apply.

It will be observed that there is no limitation whatever preventing a person under incapacity, either by reason of infancy or otherwise, from obtaining a patent.

There does not appear to have ever been a question as to whether an infant or a married woman might under the old law have become a grantee of letters patent. The words "any person" and the Married Women's Property Act, 1882, however, swept away any doubt that might have been entertained on the subject. By sect. 83, which deals with persons under disability of lunacy or infancy, it is enacted that the necessary declarations and other acts may be made and performed by the committee or by a guardian appointed by the Court. Persons under disability.

It was always competent for an alien to obtain a patent (a).

But *quære* if letters patent could be obtained by an alien enemy (b).

The practice of the Patent Office during the war, and as affected by the Treaties of Peace, will be dealt with in Chapters VIII. and XVIII.

In *Patterson v. Gas Light and Coke Co.* (L. R. 2 Ch. D. 832), James, L.J., in the Court of Appeal, said: "Although it is not necessary for the determination of this suit to pronounce any final decision on this point, we deem it right to say that

(a) *Wirth's Patent*, L. R. 12 Ch. D. 303; 28 W. R. 329 (but see p. 17 in connection with this particular case); *Chappell v. Purday*, 14 M. & W. at p. 318, and *Carez's Application*, 6 R. P. C. 552.
 (b) *Bloxam v. Elsee*, 1 C. & P. 558.

we think it at the least very questionable whether it can be competent for a member of an official commission or committee to take out a patent for the subject-matter of their official investigation. . . . The consideration for every patent is the communication of useful information to the public. What consideration is there when the information was already the property of the State?" These remarks would seem to have a bearing upon the validity of patents granted to Government officials employed to discover or produce munitions of war, without regard to any reward which may have been recommended to such officials by the Royal Commission appointed for that purpose (c).

Under sect. 1 of the Act of 1907, quoted above, it is clear that a patent may be granted to a corporation, together with the true and first inventor; and a grant to a corporation alone can be made in the case of a new manufacture communicated to it from abroad, or under the provisions of the International Convention (d). But a corporation cannot apply in the ordinary way open to an individual and describe itself as "the true and first inventor," since a corporation could not be said to invent in the modern sense of the word (e).

The enactment that the true and first inventor may receive a grant of letters patent jointly with another person is for the purpose of enabling an impecunious inventor to associate himself with a financier and so to give the latter an interest in the invention from the beginning.

As to the rights of co-grantees and co-owners *inter se*, see Chap. XI.

The declaration.

The law requires that each application shall be accompanied by a declaration to the effect that the applicant, or in the case of joint applicants, one at least is "the true and first inventor;" and in the case of an application by the representative of a deceased inventor a declaration is required that

(c) See Chap. XVII.

(d) *Carez's Application*, 6 R. P. O. 552; see *In re The Société Anonyme du Générateur du Temple*, 13 R. P. O. 54. See Chap. VIII. for formalities

when a corporation is applicant.

(e) Hindmarch on Patents, p. 34, and the cases cited in note (d), *supra*.

the applicant believes the deceased to have been the "true and first inventor."

We have now to deal with the construction of the words "true and first inventor."

TRUE AND FIRST INVENTOR.

By the common law the Crown had power to grant letters patent, giving monopolies for manufactures newly introduced into the realm, whether newly invented or newly imported. There is no doubt, therefore, that the words "true and first inventor" in the Statute of Monopolies included both—

- (1) True and first inventor (in the modern popular sense), and
- (2) True and first importer.

The right of the Crown to grant letters patent to true and first importers of inventions appears to have been a common law right. In the early days of manufacturing enterprise, when true inventors were so exceedingly rare as scarcely ever to be heard of, the word "inventor" had not acquired the meaning which it has at present, and seems to have been used to designate a first introducer rather than a first inventor. In the early reports shortly succeeding the Statute of Monopolies we do not find the judges in any difficulty in dealing with the words "true and first inventor," showing that the word "inventor" had not the precise meaning which it has since acquired. We find that so far back as 1567 a patent had been granted to one *Hastings (f)* for the making of frisadoes in consideration of his having *imported the skill of manufacturing them from abroad*. So in *Mathey's Case*, "It was granted unto him the sole making of knives with bone hafts and plates of lattice, because, as the patent suggested, he brought the first use thereof from beyond the seas." This was in the reign of Elizabeth. In *The Clothworkers of Ipswich* (1615, 1 W. P. C. 6; 1 Godb. 252) we have this said: "The king granted unto B. that none besides himself should make ordnances for battery in the time of war: such grant was adjudged void. But if a man hath brought in a new invention and a new trade in the kingdom in peril of his life and consumption of his estate or stock, &c., or if a man

(f) See "Monopolies by Patents," by Mr. Gordon, at p. 220.

hath made a new discovery of anything, in such cases the king, of his grace and favour in recompense of his costs and travail, may grant by charter unto him that he only shall use such a trade or trafique for a certain time; because at first the people of the kingdom are ignorant, and have not the knowledge or skill to use it. But when that patent is expired the king cannot make a new grant thereof."

Then came the Statute of Monopolies, and we have seen that the 6th section of that Act carefully excepted "the sole working or making of any manner of new manufacture within this realm, to the true and first inventor or inventors of such manufactures, which others at the time of making such letters patents and grants shall not use."

Afterwards came the decision of *Edgebury v. Stevens* (1691, 1 W. P. C. 35; 2 Salk. 447), where it is said, "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." See the remarks of Eyre, C.J., in *Boulton v. Bull* (1795, 2 H. Bl. at p. 491; Dav. P. C. 162).

Jessel, M.R.,
on importers.

The effect of numerous earlier decisions was summed up by Jessel, M.R., in the important case of *Plimpton v. Malcolmson* (1876, L. R. 3 Ch. D. at p. 555): "The Act of Parliament (21 Jac. I. c. 3) on which all these patents are founded, tells us this: that to come within the exception of the Statute of Monopolies a man who has the patent must be the first and true inventor, and he must describe something in his specification which is not already known and used. What is the meaning of a first and true inventor? To ascertain its meaning you must have recourse, no doubt, to various decisions given on the statute, which is very nearly three hundred years old. . . . In order that those who may have to consider my judgment hereafter may know the view that I take of the statute, combined with decisions, I will state the result at which I have arrived. As I understand, shortly after the passing of the statute, the question arose whether a man could be called a first and true inventor who, in the popular

sense, had never invented anything, but who having learned abroad (that is out of the realm, in a foreign country, because it has been decided that Scotland is within the realm for this purpose) that somebody else had invented something, quietly copied the invention, and brought it over to this country, and then took out a patent. As I said before, in the popular sense he had invented nothing. But it was decided, and now, therefore, is the legal sense and meaning of the statute, that he was a first and true inventor within the statute, if the invention being in other respects novel and useful, was not previously known in this country—'known' being used in that particular sense as being part of what had been called the common or public knowledge of the country" (*g*).

Long before the Act of 1852 (*h*), however, there had been a custom or practice for the applicant to state distinctly in his declaration, by virtue of which qualification he prayed for a patent. By sect. 5, sub-sect. 2, of the Act of 1883, it was enacted for the first time that "*every application must contain a declaration that the applicant . . . claims to be the true and first inventor.*" The Rules, however, continued the old practice of using distinct forms for original inventions and those communicated from abroad, but required the applicant on a communicated invention to state that he claimed to be the true and first inventor.

In *Avery's Patent* (L. R. 36 Ch. D. at p. 316), Stirling, J., in giving judgment, said: "The rules which have been framed by the Board of Trade under the power conferred upon them by sect. 101 of the statute contain provisions which the statute itself does not contain, in reference to an application for a grant for an invention which has been communicated from abroad. Rule 27 provides that the application for such a grant shall be in the form 'A' in the 2nd schedule, and that form is different from that which is prescribed by the statute and from the terms in which Lindsay made his application." (His lordship read the form and continued:) "That form has been framed so as to fit in with sect. 5, sub-sect. 2, of the statute, which enacts

Declarations
distinguish
inventors
into classes.

Legal effect of
this.

(*g*) And see Jessel, M.R., in 3 Ex. D. 203.

Marsden v. Saville Street Co., L. R. (*h*) See Hindmarch, pp. 509, 510.

that an application must contain a declaration . . . that the applicant is in possession of an invention, whereof, he . . . claims to be the true and first inventor. That form has not been followed in this case. There is no decision that a patent, taken out as for an original invention, when in fact the invention patented was communicated from abroad, is void, though there is in the case of *Milligan v. Marsh* (2 Jur. N. S. 1083) what appears to be a dictum of Vice-Chancellor Sir Page Wood to that effect; nor is there any decision that where an invention is partly original and partly communicated from abroad, the part communicated from abroad ought to be distinguished in the specification; but in the case of *Renard v. Levenstein* (10 L. T. N. S. 177), the Lord Justice Knight Bruce expressed great doubt upon the point." . . . (And at p. 318:) "That being so notwithstanding that the invention was founded on a communication received from abroad, it appears to me that it well might be held that the statutory declaration made by the applicant was true in point of law."

And Lindley, L.J., in the case of *Moser v. Marsden* (10 R. P. C. at p. 359), said: "Then it was suggested that as the English patentee had himself improved *Grosselin's* invention, the specification ought to have shown this on its face; and that as the whole invention was not communicated to the plaintiff by *Grosselin*, as stated by the plaintiff, the patent is bad. This point has been raised before, but as yet it has not found favour in any Court. Nor ought it; there is no substance in it. The patentee is the true and first inventor within the meaning of the patent laws, whether he invents himself or whether he simply imports a foreign invention. I cannot see how he is anything but a true and first inventor if he does both; that is, if he both imports a foreign invention and improves it himself."

It follows from the above decisions that a person who has derived an invention from abroad has a choice: he may either say nothing of the source of his knowledge and apply on Form 1 (i) stating that he is the true and first inventor, or he may apply on Form 1A (i) stating that the invention has been

(i) Appendix—Patent Office Rules and Forms.

communicated to him from abroad, stating the name of the person who has made the communication, and stating further, that he (the applicant) is the true and first inventor, as in law we see him to be. In the first case he is under the burden of using the utmost good faith in disclosing the invention (see Chap. VI.). In the second he need only use the utmost good faith in disclosing what has been disclosed to him by his correspondent (*j*). It follows also that in either case the importer of an invention from abroad need not be a meritorious importer; he may be merely the clerk or agent to whom the communication is made by the foreign inventor and as trustee for him, so that he may hold as trustee for the foreigner, but in law the applicant is nevertheless the true and first inventor whether his allegation of communication be true or not (*k*), and save in so far as his relations with his employers are concerned he is in the legal position of a patentee as against others. A communication made in this country by one British subject to another, of an invention, does not make the person to whom the communication is made the first and true inventor within the meaning of the Statute of Monopolies (*l*).¹ But circumstances might render it necessary to send over from abroad some person who understood the invention, in order that the intended grantee might be able to understand and properly describe it in the specification. It is submitted that this would not prevent the communication from being a genuine "communication from abroad" (*m*).

It was decided in *Wirth's Patent* (12 C. D. 303; 23 W. R. 329) that a patent could be granted to a foreigner resident abroad for an invention communicated to him by another foreigner also resident abroad. This, however, as a matter of practice, is no longer possible, a direction having been given

(*j*) See Chap. VI.

(*k*) *Beard v. Egerton*, 3 C. B. at p. 129; *Nickels v. Ross*, 8 C. B. at p. 723; *Steedman v. Marsh*, 2 Jur. N. S. 391; *Avery's Patent*, 36 C. D. 307.

(*l*) *Marsden v. Savile Street*

L.P.

Foundry Co., L. R. 3 Ex. D., per Jessel, M.R., at p. 206.

(*m*) Discussed but not decided in *Pilkington v. Yeakley Vacuum Hammer Co.*, 18 R. P. C. 459, and see (on same patent) *Jameson's Patent*, 19 R. P. C. 246.

that only persons resident in the U.K. may apply on Form 1A for a grant, this direction being expressly designed to prevent foreign agents from making the declaration (n).

If the invention has been communicated from abroad the Comptroller will not enter into any inquiry as to whether it was obtained honestly or otherwise (o).

The special provisions with respect to applications under the International Convention will be discussed later in this chapter.

The actual inventor.

An actual inventor is a person who, either by accident or design, produces or discovers an art or manufacture. The operation of the mind in which the invention originates must be that of the mind of the inventor. The carrying out of the results of the operation of the mind may be done by the hands of the inventor or by those of any one else whom he may employ for the purpose. What amount, if any, of labour of the mind is required is another question, and will be dealt with more fully under the head of "Subject-matter." But it may be broadly stated here, that provided the invention has originated in the mind of the patentee, the Court will not inquire further, but will judge in the main from the results produced as shown in the invention itself.

It must be remembered that the question "Is the patentee true and first inventor?" is entirely separate and distinct from one which we shall have to consider later, in the Chapter on Novelty, viz., "Is the invention itself new?" In the former case we are dealing with the history of an idea in the mind of a particular man; in the latter with the history of a manufacture.

True inventor and novelty distinguished.

This difference was pointed out by Tindal, C.J., in *Gibson and Campbell v. Brand* (1 W. P. C. at p. 628): "The defendant next says that these letters patent have not been granted to the true and first inventors, which you are aware is a condition required by the statute. Now a man may publish to the world that which is perfectly new in all its use, and has not before been enjoyed, and yet he may not be the

(n) *Official Journal*, 9th May, 1884. (o) See Chap. IX.

first and true inventor; he may have borrowed it from some other person, he may have taken it from a book, he may have learnt it from a specification; and then the legislature never intended that a person who had taken all his knowledge from the act of another, from the labours and assiduity or ingenuity of another, should be the man who was to receive the benefit of another's skill. There is some distinction, although perhaps not a very broad one, between the plea which alleges the plaintiff's were not the first and true inventors and that on which I conceive the principal question between the parties will turn . . . whether the subject-matter of this patent was known in England at the time the letters patent were granted?" (*p*).

In *Tennant's Case* (1 W. P. C. 125) a material portion of the invention claimed was found to have been suggested to the patentee by a chemist at Glasgow. Lord Ellenborough held, that the patent was bad because the plaintiff was not the inventor. It will be observed in this case, that although it is possible that the plaintiff was the first person to use the particular method for making bleaching liquor, still, inasmuch as that method of producing this bleaching liquor was thought out by some one else and communicated to the plaintiff, he was held not to be an inventor.

In *Cornish v. Keene* (1 W. P. C. 507), Tindal, C.J., said: "Sometimes it is a material question to determine whether the party who got the patent was the real and original inventor or not; because these patents are granted as a reward, not only for the benefit conferred upon the public by the discovery, but also to the ingenuity of the first inventor; and although it is proved that it is a new discovery, so far as the world is concerned, yet if anybody is able to show that although that (*q*) was new—that the party who got the patent was not the man whose ingenuity first discovered it, that he borrowed it from A. or B., or had taken it from a book that was printed in England, and which was open to all the world—then, although the public had the benefit of it, it would be

(*p*) And see *Househill Co. v. Neilson*, 1 W. P. C. at p. 689.

(*q*) I.e., the publication to the world.

an important question whether he was the first and original inventor of it." There is no doubt that, under the circumstances stated by the Chief Justice, the patentee would not be the original inventor.

We do not propose to deal at length with the cases that have followed *Cornish v. Keene*. The principle laid down in those cases we have cited has invariably been followed.

*Dollond's
Case.*

A. may have invented something; it may have pleased him to try a few experiments with his invention, and then to abandon it without publication. B. may subsequently have invented the same thing altogether independently of A. If B. applies for letters patent he is at law the first inventor; but should it be shown that the process of invention was not carried on in B.'s mind at all, but that A. communicated his ideas to B., although with the full intention of abandoning them, B. will not be the first inventor. Take, for instance, the case of *Dollond's Patent* (unreported but mentioned with many other cases in 1 W. P. C. 43): this was an improvement in the manufacture of object-glasses for telescopes. Dr. K. had made and used identically similar object-glasses for his own purposes, but he had in no way published his invention. Dollond, without any communication from Dr. K., had re-invented these object-glasses; held, that Dollond's patent was good.

In *Lewis v. Marling* (10 B. & C. at p. 27; 1 W. P. C. at p. 496; 4 C. & P. at p. 58) Bayley, J., said: "If I discover a thing for myself, it is no objection to my claim to a patent that another also has made the discovery, provided I first introduce it into public use." The suggestion in that case having been that the patentee had acquired his invention by seeing a model of a similar machine which had been brought from America, it was disproved that he had seen the model, and consequently he was held to be the first and true inventor.

*Master and
servant.*

The extent to which science has developed in modern times, and the immense labour and time required to work out the details of construction of a complicated machine, frequently make it impossible for one man to perfect his invention by himself. And it is the practice of inventors to suggest the

main idea to subordinates, together with rough plans and sketches, and to leave the practical working out of the details to the latter, a task often requiring great skill, and occasionally even inventive ability. But this skill, while exercised in the employment of the master, and under his general directions, does not entitle the servant or workman to claim an interest in the invention, although the claim by the master to the ingenuity of the servant does not extend beyond mere improvements in mechanical details. Exactly to what extent the man who conceives an idea is entitled to improvements suggested by the person he employs to work out that idea is difficult to define, and must depend upon the facts of each case in which the question may arise; but the guiding principle is involved in the question, "Is it the idea itself, or is it merely the method of carrying the idea into effect, that constitutes the pith of the invention?"

The rights of
the master.

The cases illustrating the question of "true and first" inventor as affected by the relation of master and servant must be distinguished from those in which a servant is bound under an express or implied contract to give to the master the benefit of any inventions which he (the servant) may make while in the master's employ. In these latter there is usually no doubt that the servant is the inventor, and the only question for decision is as to the right of the master to have the patent when granted assigned to or held in trust for him by the servant. Such cases will be referred to in the discussion now following.

Cases to illus-
trate.

The summing up of Baron Alderson, in the case of *Minter v. Wells* (1 W. P. C. at p. 129), is instructive on this point: "The patentee," said the learned judge, "claims under the patent, stating, in his petition to the Crown, that he is the true inventor of the machine in question; and if it could be shown that he was not the true inventor, but that some one else had invented it, the Crown is deceived in that suggestion, which was the foundation on which it granted the patent; and then the law is, that the patent obtained under such circumstances would be void, and no action could be maintained against the party for the infringement of the patent. . . . If

Sutton (*r*) suggested the principle to Minter, then he, Sutton, 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."

In *Allen v. Rawson* (1 C. B. at p. 567), Erle, J., directed the jury thus: "I take the law to be 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 servant or agent made the suggestion of the subordinate improvement of the primary and improved principle." This was confirmed by Tindal, C.J., who said (p. 574): "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 on its own merits. But when we see that the principle and object of the invention are complete without it, I think it is too much that a suggestion of a workman, employed in the course of the experiments, of something calculated more easily to carry into effect the conceptions of the inventor, should render the whole patent void." This case was followed by Buckley, J., in *In re Smith's Patent* (22 R. P. C. 57).

But where the idea of the invention has not been suggested by the employer, there is nothing to prevent the servant having a patent. The Solicitor-General, in *In re Heald's Patent* (8 R. P. C. 429), said: "I am not aware of any authority which lays it down that the invention of a servant, even made in the employer's time, and with the use of the employer's materials, and at the expense of the employer, thereby becomes

(*r*) A workman in the plaintiff's employ.

the property of the employer, so as to prevent the person employed from taking out a patent for it," particularly where the servant has been requested to invent, as in *Marshall and Naylor's Patents* (17 R. P. C. 553). Where servant requested to invent.

The cases all seem to show that the man who conceives the idea has no right to the inventions of the man he employs to carry it out other than mere improvements in mechanical details, whether that man be his immediate servant or an independent mechanic, and the relationship of master and servant gives to the master no rights to the invention of his servant.

It may be, however, that the relations between master and servant may be of such a close and confidential character that it may be inequitable to allow the servant to retain the benefit of a patent. In *The Worthington Pumping Engine Co. v. Moore* (20 R. P. C. 41), the plaintiffs employed the defendant as their agent and manager in England, and communications constantly passed between them as to improvements and alterations in the machines sold to suit the English market. The defendant was employed at a high rate of remuneration and a commission. There was no express stipulation as to inventions or original suggestions which might be made by the defendant. The defendant took out three patents for inventions which he employed in the business of the plaintiffs. He was subsequently dismissed, and sought to restrain the plaintiffs from using the patented inventions. This action was to obtain a declaration that the defendant should be declared a trustee for the said patents on behalf of the plaintiffs. Byrne, J., said (p. 46): "I think he (the defendant) would not have been acting in accordance with the good faith implied in his contract had he kept back new ideas or details of construction suggested or carried out in the ordinary course of business between the parties (even though such ideas or details might have been in the hands of a third person properly subject-matter for a patent) with a view to his personal profit at the expense of the plaintiff corporation. It appears to me that the degree of good faith due from the defendant to the plaintiff company was little, if at all, less than that required from a partner towards the Where relations confidential. Cases.

firm of which he was a member . . . (p. 48). I propose now to deal with the principles of law applicable to the case; and first I desire to say that I recognise and quite appreciate the principle of those cases which have established that the mere existence of a contract of service does not *per se* disqualify a servant from taking out a patent for an invention made by him during his term of service, even though the invention may relate to subject-matter germane to and useful to his employers in their business, and that, even though the servant may have made use of his employers' time and servants and materials in bringing his invention to completion, and may have allowed his employers to use the invention while in their employment; but, on the other hand, without repeating what has been so fully and admirably expressed by the Court of Appeal in the two cases of *Lamb v. Evans* and *Robb v. Green* (s), it is clear that all the circumstances must be considered in each case. I consider that, bearing in mind the principles laid down in the authorities to which I have referred, it is impossible to say in the present case that the defendant has established the right he claims, having regard to the obligations to be implied arising from his contract of service, and I am of opinion that his case is inconsistent with an observance of that good faith which ought properly to be inferred or implied as an obligation arising from his contract" (t).

Similarly on the basis of express or implied contract a servant may be sued for damages and an injunction to restrain him from making any use of secrets learned while in the service of the employer (u).

Applications
in fraud of
inventor.

By sect. 15 of the Act of 1907, as amended by the Act of 1919, "*(1) 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*

(s) See *Lamb v. Evans*, 1893, L. R. 1 Ch. 218; *Robb v. Green*, 1895, L. R. 2 Q. B. 315.

(t) And see *Richmond & Co. v. Wrightson*, 22 R. P. O. 25; and *Edisonia, Ltd. v. Forse*, 25 R. P. C.

546; *British Reinforced Concrete Co. v. Lind*, 34 R. P. C. 101.

(u) *The Amber, Size and Chemical Co., Ltd. v. Menzel*, 1913, 2 Ch. 239; *Alperton Rubber Co. v. Manning*, 33 T. L. R. 205; 116 L. T. 499.

invention subsequent to that fraudulent application during the period of provisional protection.

“(2) *Where a patent has been revoked by the Court on the ground that it has been obtained in fraud of the true and first inventor, or where the grant has been refused by the comptroller under the provisions of paragraph (a) of sub-section (1) of section eleven of this Act or revoked on the same ground under the provisions of section twenty-six of this Act, the comptroller may, on the application of the true inventor made in accordance with the provisions of this Act, grant to him a patent for the whole or any part of the invention in lieu of and bearing the same date as the patent so revoked, or as would have been borne by the patent if the grant thereof had not been refused.*

“*Provided that no action shall be brought for any infringement of the patent so granted committed before the actual date when such patent was granted.*”

In *Richmond & Co., Ltd. v. Wrightson* (22 R. P. C. 25), the defendant Wrightson had applied for certain patents (including foreign patents), having obtained the invention either from A. or from B. (but from which of them was not decided). Buckley, J., made a declaration that the defendant was trustee of all the patents for A. and B. jointly. Subsequently (*unreported*), when the time came for sealing the patents, it was found by Sir E. Carson, S.-G., that as Wrightson was expressly declared by the judgment not to be the true and first inventor, no patent could be sealed. But A. and B. were able to apply for a patent under sect. 35 of the Act of 1883.

By sect. 4 of the Act of 1907, “*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 invention. And such protection from the consequences of use and publication is in this Act referred to as provisional protection.*”

Under the Act of 1852, s. 23, the Lord Chancellor had a discretion as to the date of the patent. This discretion no longer exists. The Act of 1883, s. 13, first fixed the date of application as the date of the patent.

The general question of concurrent applications, where there is no fraud, that is, where each applicant is in a position to offer the consideration of invention, will be considered in a subsequent chapter. It is only material here so far as concurrent application is brought about by reason of one man fraudulently appropriating the invention of another.

Applications
under Inter-
national Con-
vention.

It was provided by sect. 103 of the Act of 1883, as amended by sect. 6 of the Act of 1885, and re-enacted by sect. 91 of the Act of 1907, amended by the Act of 1914, that any person who has applied for protection for any patent in any foreign State with whom we have entered into international arrangements for mutual protection of inventions, shall be entitled to a patent for his invention in this country in priority to other applicants, and such patent, on registration, shall have the same date as the date of the protection obtained in such foreign State, provided that his application is made within twelve months from his applying for protection in the foreign State with which the arrangement is in force. The section also applies to such British Colonies as have made arrangements for the protection of inventions patented in this country.

The object of the section is to preserve to the foreign inventor a priority for a certain period over persons who might otherwise have anticipated him by filing an application for a patent for his invention without authority to do so.

The rights under this section were, under the Convention of 1883, purely personal to the applicant in the foreign country himself, and could not be enjoyed by the agent of such applicant or by any person to whom he had communicated his invention (*v*), but under the 1911 Convention and the Patents and Designs Act, 1914, the right is extended to the legal representative or assignee of the applicant in the foreign country.

In *Eisler's Application* (*w*) the applicant had made an application in the United States, but he prayed that a patent should be granted, not to him, but to a company. He now applied for a patent to be granted to him in this country claiming the

(*v*) *Shallenberger's Application*, 6 R. P. C. 550; *Carez's Application*, 6 R. P. C. 552; *Lentz and Berner's Application*, 31 R. P. C. 71.
(*w*) 34 R. P. C. 69.

date of his application in the United States. The Comptroller having his suspicions aroused by the circumstances of the application in the United States required the applicant to declare whether or not he had assigned his right in this country, and on the applicant's refusal to answer, the Comptroller who was supported in his attitude by the Law Officer declined to proceed with the application.

A foreign patentee thus has alternative rights: he may either take advantage of the Act and apply for a patent, antedated to the date of his first foreign application, and thereby shorten the period of protection to that extent, or he may obtain a patent for the full period from the actual date of application, in the ordinary way, the date of the patent being conclusive to show which course he has pursued; he may also obtain a patent for the full period by instructing his British agent to apply on a communication from abroad, the patent when obtained to be conveyed to the foreigner; but after having obtained a patent for the full period in the ordinary way, he may not avail himself of the provisions of sect. 91 to escape the result of a publication of his invention during the period that elapsed between his foreign application and his application in this country (*x*).

Foreigner has
alternative
rights.

Rule 15 provides that the application in this country must be made within twelve months of the earliest foreign application, and the dates of all foreign applications must be set forth. If therefore, the applicant conceals the fact of a foreign application having been made prior to that specific one, in respect of which he requests his British application to be dated, it is submitted that he has committed a fraud on the Crown, and that his declaration is false in a material particular. This point was taken in the pleadings attacking the validity of a patent in a case in our experience but it was not brought to trial (*y*).

The time limited by the Convention for the filing of applications has been extended by the Treaties of Peace subject to

(*x*) *The British Tanning Co. v. Groth*, 8 R. P. C. 113; *Acetylene Illuminating Co. v. United Alkali Co.*, 19 R. P. C. 222.

(*y*) See *Van der Poole's Patent*, 7 R. P. C. 69, as supporting this view of the law.

provisions for safeguarding the rights of persons *bonâ fide* in possession of conflicting rights prior to the coming into force of the Treaties (see Chap. XVIII.).

Where the foreign inventor had made two applications in his own country, the first of which applications was abortive, and further, the foreign patentee made a declaration that the proceedings under the second application were in all respects the same as if no prior application had been made, it was held by the Law Officer that the period (seven months at that time) should run from the date of protection obtained upon the second application, and he directed that the English patent should be sealed as of that date (*z*).

Where a foreign inventor was resident in a country with which international arrangements for the mutual protection of inventions was made after an application had already been lodged in this country by another person for letters patent in respect of a similar invention, it was held by the Law Officer that such foreign inventor was entitled to apply in priority over other applicants for so much of the seven months as remained after the Order in Council declaring such foreign country to be "one of the contracting States" (*a*).

(*z*) *Van de Poole's Patent*, 7 R. P. C. 69. (*a*) *Main's Patent*, 7 R. P. C. 13.

CHAPTER III.

SUBJECT-MATTER.

THE Statute of Monopolies declared all grants of monopoly rights to be void at common law, but sect. 6 provided "*that any declaration before mentioned shall not extend to any letters patent and grants of privilege for the term of fourteen years or under hereafter to be made, of the sole working or making of any manner of new manufactures within this Realm to the true and first inventor and inventors of such manufactures, which others at the time of making such letters patent shall not use. . . .*" This definition of the subject-matter of a valid grant has been followed in all subsequent enactments; by sect. 93 of the Act of 1907, "*'Invention' means any manner of new manufacture the subject of letters patent and grant of privilege within section six of the Statute of Monopolies.*" Statute of Monopolies.

In actions for infringement and petitions for revocation the validity of the patent is frequently called in question under the plea that "the alleged invention is not proper subject-matter for Letters Patent" and the object of this chapter is to discuss the significance of this plea and the legal requirements of an invention to secure immunity from its attack. The plea is used in two senses, which are nevertheless related.

Firstly, it is clear that in order to be classed as a "manufacture" an invention must have a very close relation to something tangible. It is easy to assent to the proposition that the production of a new class of article, or a method of producing a new artificial substance is a "manufacture," and that on the other hand a plan of campaign in warfare or business, or the discovery of a hitherto unknown natural law is not a "manufacture."

The importance of progress was gradually realised during the

Meaning of
"Manufacture."

great industrial revolution of the late eighteenth and early nineteenth centuries, and we find that the Courts gradually extended the meaning of the word manufacture to include improvements in manufacture and to changes in method which though small in themselves are shown to have had great economic importance. In 1819 Abbott, C.J., said (a): "Now the words 'manufacture' has been generally understood to denote either a thing made, which is useful for its own sake, and vendible as such, as a medicine, a stove, a telescope, and many others, or to mean an engine or instrument to be employed either in the making of some previously known article, or in some other useful purpose, as a stocking-frame, or a steam engine for raising water from mines. Or it may perhaps extend also to a new process to be carried on by known implements, or elements, acting upon known substances, but producing it in a cheaper or more expeditious manner, or of a better or more useful kind. But no merely philosophical or abstract principle can answer to the word manufactures. Something of a corporeal and substantial nature, something that can be made by man from the matters subjected to his art and skill, or at the least some new mode of employing practically his art and skill, is requisite to satisfy this word." The doubt felt by the Chief Justice as to patents for processes has long since been resolved in their favour.

The judges at first seemed to be inclined to limit the subject-matter of letters patent to new articles produced; but as the arts and manufactures of the country progressed and increased, it was seen that by far the most important inventions were inventions of processes for making old and well-known articles of commerce, and so it became evident that should the construction of the words "new manufactures" be entirely limited to the production of new articles, to the exclusion of the process of manufacturing old articles by cheaper, better and improved methods, the inducement which the common law intended to give to inventors would be curtailed to the narrowest possible limits. The judgment in *Boulton v. Bull* (1795, Dav. P. C. 191) confirmed the change of opinion, and

(a) *R. v. Wheeler*, 2 B. & Ald., at p. 349.

in 1841, in the case of *Gibson v. Brand* (1 W. P. C. at p. 633), Tindal, C.J., said: "The patent is taken out 'for a new or improved process for the manufacture of silk, and silk in combination with certain other fibrous substances,' taken out therefore strictly for a process . . . undoubtedly there is a very strong reason to suppose if the specification is carefully and properly prepared, so as to point out with great distinctness and minuteness what the process is, that such a patent may be good in law. Such certainly was the opinion of Chief Justice Eyre in *Boulton v. Watt* (1795, 2 H. Bl. 468; Dav. P. C. 207), and such also appears to have been the opinion (carefully guarding against any abuse of that doctrine) of Lord Tenterden in the case of *R. v. Wheeler* (cited above)."

It is still a common thing for the Patent Office to receive requests for Patents for ingenious notions which cannot be classed as manufactures under any interpretation of the word, such, for example, as schemes for arranging correspondence, new systems of musical notations, a method for extracting metal from the human body, the use of a well-known substance as a manure for increasing the fertility of the soil, and many others (b). Inasmuch as these applications rarely result in the grant of a patent validity is seldom attacked in the Courts on the ground that the alleged invention lacks subject-matter in the sense of having no relation to a manufacture whatever.

There are nevertheless some cases which illustrate this aspect of the question of subject-matter. For example, no man can claim the monopoly of a principle, for that would be to claim the laws of nature, which have always existed. Man merely discovers the principle; but if, when he discovers a principle, he can discover a method of utilising the principle so as to make it applicable to the production of a new manufacture, he can obtain a patent for the method, and to a large extent will be protected in the application of the principle itself.

(b) See, e.g., *Johnson's Application*, 19 R. P. C. 56; *A. F.'s Application*, 31 R. P. C. 58; *C. and W.'s Application*, 31 R. P. C. 235; *B. A.'s Application*, 32 R. P. C. 348; *T.'s Application*, 37 R. P. C. 109; *F.'s Application*, 37 R. P. C. 112, and the doubtful case of *Cooper's Application*, 19 R. P. C. 53.¹

Cases on
alleged
claims to
principle.

Lord Justice Clark Hope, in directing the jury in the case of *The Household Co. v. Neilson* (1843, 1 W. P. C. at p. 685), said: "I state to you the law to be that you may obtain a patent for a mode of carrying a principle into effect; and if you suggest and discover, not only the principle, but suggest and invent how it may be applied to a practical result by mechanical contrivance and apparatus, and show that you are aware that no particular sort or modification, or form of the apparatus, is essential in order to obtain benefit from the principle; then you may take out your patent for the mode of carrying it into effect, and are not under the necessity of describing and confining yourself to one form of apparatus. If that were necessary you see what would be the result? Why, that a patent could hardly ever be obtained for any mode of carrying a newly discovered principle into practical results though the most valuable of all discoveries. For the best form and shape or modification of apparatus cannot, in matters of such vast range, and requiring observation on such a great scale, be attained at once; and so the thing would become known, and so the right lost, long before all the various kinds of apparatus could be tried. Hence you may generally claim the mode of carrying the principle into effect by mechanical contrivance, so that any sort of apparatus applied in the way stated will more or less produce the benefit, and you are not tied down to any form" (c).

In the above case, as in the case of *Neilson v. Harford* (1841, 1 W. P. C. 295), the patent was for producing heat in furnaces, by blowing the air for the furnace through a vessel which was heated. It was stated in the specification that the size of the vessel was to depend on the circumstances, and there was no claim. The Court held that the method suggested for carrying the principle into effect was sufficient to support a patent.

In *Otto v. Linford* (46 L. T. N. S. 36), claim 1 of the plaintiff's specification ran as follows: "Admitting to the cylinder a mixture of combustible gas or vapour with air, separate from a charge of air or incombustible gas, so that the development of heat and the expansion or increase of pressure

(c) See also Moulton, L.J., quoted on p. 48, *post*.

produced by the combustion *are rendered gradual* substantially as and for the purposes set forth."

Jessel, M.R., in the Court of Appeal, said (p. 39): "It is said that what is claimed is a principle . . . or, as is sometimes termed, the 'idea' of putting a cushion of air between the explosive mixture and the piston of the gas motor engine, so as to regulate, detain, or make gradual, what would otherwise be a sudden explosion. Of course that could not be patented. I do not read the patent so; I read the patent as being to the effect that the patentee tells us that there is the idea which he wishes to carry out; but he also describes other kinds of machines which will carry it out; and he claims to carry it out substantially by one or other of these machines. That is the subject of a patent." The Master of the Rolls then instanced the case of *Neilson v. Harford* (supra).

In *British United Shoe Machinery Co. v. Simon Collier, Ltd. (d)*, the patent was for a machine for performing some of the operations involved in boot-making, more particularly trimming the edge of the sole. The position of the trimming knife at any moment was automatically governed by the position of a guide which bore upon another portion of the boot so that the width of the sole was varied in relation to that other portion. One of the patentee's claims was as follows: "In a sole trimming machine, a trimming knife, a guide, support therefor, and automatic means for automatically varying the relative positions of the knife and guide during the trimming operation for the purpose described." One method of effecting such automatic variation (by means of a cam) was described and made the subject of other claims. Mr. Justice Parker said: "If on the true construction of the specification, the claim is as wide as the defendants contend, the validity of the patent depends upon whether an inventor, who discloses one way of doing automatically for a particular purpose what, in existing machines, could be done for the same purpose, not indeed, automatically, but by the service of skill on the part of the workman, can obtain the grant of letters patent for all means of doing the same thing automatically for the same purpose. It appears

(d) Reported on this point in 21 R. P. C. 21.

from the judgment of Baron Alderson in *Jupe v. Pratt* (e), approved by the House of Lords in *Chamberlain v. Mayor of Bradford* (f), that though you cannot take out a patent for a principle, yet if the principle is new, and you show one mode of carrying it into effect, you may protect yourself against all other modes of carrying the principle into effect. If, however, the principle is not new, you can only protect yourself against those modes of carrying it into effect which are substantially the same as the mode you have yourself invented, the question being in each case what is the pith and marrow of the invention sought to be protected, and it being impossible to treat any principle already known as part of such pith and marrow. Thus, where the principle is old, a claim to all modes of carrying it into effect will avoid the patent as in *Patterson v. Gas Light and Coke Co.* (g). . . . In the present case, considering that in existing machines the relative position of knife and guide could be varied (though not automatically) . . . the problem was simply how to do automatically what could already be done by the skill of the workman. On the other hand, the principle which the inventor applies for the solution of the problem is the capacity of a cam to vary the relative position of two parts of a machine while the machine is running. Assuming this principle to be new, it might be possible for the inventor, having shown one method of applying it to the solution of the problem, to protect himself during the life of his patent from any other method of applying it for the same purpose, but I do not think that the novelty of the principle applied would enable him to make a valid claim for all means of solving the problem whether the same or a different principle were applied to its solution. If he could do so, it would seem to follow that the invention of one means to secure a particular end would entitle an inventor to protection against all means of attaining the same end. If therefore the claim be construed as including all automatic means of solving the problem (the learned judge

(e) 1 W. P. C. 146.

(f) 20 R. P. C. 684, and see
British United Shoe Machinery Co.
v. Standard Rotary Machine Co.,

35 R. P. C., per Lord Haldane, at
pp. 46 and 47.

(g) L. R. 2 C. D. 812.

held that it had this meaning), I am of opinion it is too wide, and is not proper subject-matter for letters patent" (h).

Doubts have been expressed as to whether a patent can be granted for a new product irrespective of the manner in which it had been brought into existence. It is submitted that such a grant would be wholly invalid, since it would not be for a manufacture at all. For example, a new metal might be smelted from some well-known mineral, which metal might possess extraordinary qualities, and become indispensable. A valid patent could be obtained for the process of smelting, if novel in itself, which would probably receive a wide construction so as to cover any substantially similar process. But if some one discovered a vein of the metal in a pure state requiring no smelting, the person who had actually first discovered the metal, and patented the process of smelting, could not have a patent to prevent the owner of the vein from selling the produce of his mine. The same remarks apply to a chemical product. Of course, the use of the product in manufactures could be patented if the patentee described some particular method of using it. In other words, a discovery of properties is not a manufacture.

Patentability
of new sub-
stance dis-
cussed.

By sect. 11 of the Patents and Designs Act, 1919, the following section was inserted in the principal Act :—

"38A (1) *In the case of inventions relating to substances prepared or produced by chemical processes or intended for food or medicine, the specification shall not include claims for the substance itself, except when prepared or produced by the special methods or processes of manufacture described and claimed, or by their obvious chemical equivalents. Provided that, in an action for infringement of a patent where the invention relates to the production of a new substance, any substance of the same chemical composition and constitution shall in the absence of proof to the contrary be deemed to have been produced by the patented process.*" And later on: "*This section shall apply only to patents applied for after the passing of this Act*" (23 December, 1919).

Therefore patents in respect of chemical substances applied

(h) And see *Automatic Weighing Machine Co. v. Knight*, 6 R. P. C. at p. 308.

for before 23 December, 1919, depend for their validity if any upon the law as it was before that date, and for the reasons stated above it is suggested that substances are not subject-matter for grants inasmuch as they do not necessarily involve a manufacture.

The judgment of Lord Davey in *The Acetylene Illuminating Co. v. United Alkali Co.* (22 R. P. C. at p. 153) contains some observations which would seem to indicate a contrary view, but it is respectfully submitted that the remarks are *obiter dicta* and were clearly not necessary to a decision on the facts of that particular case; moreover, the point was not argued. His lordship said: "The title of the patent, which is still retained, is 'Improved metallic carbides applicable for use in the production of acetylene, and means for producing the same.' I need scarcely say that if the patentee had discovered a new material of the character which he mentions, a material having the very valuable commercial properties which he ascribes to it, that would have been a good subject-matter for a patent, and there would have been no question, supposing that he had done so, that his patent was a good one. He would be bound, of course, to state the means by which he produced that material; but the novelty of the means or the process by which the material was produced would have been immaterial, because the merit and the novelty of the invention would consist in the substance produced itself." This case was decided upon the ground that neither the substance nor the method of manufacture were novel. The remarks of Cotton, L.J., in *Vorwerk v. Evans* (7 R. P. C. at p. 271) are open to the same comment (i).

Equally *obiter* were the observations of Buckley, J., in *Kopp v. Rosenwald* (19 R. P. C. at p. 211), expressing the contrary view. The "invention" there consisted in an entirely new article (strips of whalebone braided together with a selvedge for sewing) by the use of a machine which was old. The claim was for "The manufacture of the new material, strips of natural whalebone covered or braided with threads of fibrous material applied substantially in the manner and by the means

(i) See also the remarks of Eyre, C.J., in *Boulton v. Bull*, 1795, Dav. P. C. at p. 208.

hereinbefore described with reference to and shown in the drawings." It was not denied during the case that the article produced was quite new and useful. Buckley, J., said: "The subject-matter of this invention, Mr. Terrell tells me, is that the patentee says there is a well-known thing known as a braiding machine, and that he tells you, 'Select a particular type of that well-known machine, namely, one with four heads and thirteen spindles. Use it in the way indicated in my specification, and the result is you will produce an article which is new,' and that is patentable. Now I doubt myself whether, in the strict sense of the word, an article can ever be treated as being in itself the subject of a patent. In saying that, I am not for a moment forgetting *Thompson v. American Braided Wire Co.* in the House of Lords. What I mean is that, assuming that an article is produced by a particular process, and that that article is new, you may say that you take out a patent for the article in the sense that it is a new thing, and it is got out in a way which was not known before, but I do not think it has ever been laid down that it would be an infringement of a patent for that article if some one ascertained a totally different path by which you would arrive at the same completed thing." The patent was held invalid by the learned judge on the ground that the claim was for a process, and that the process itself was old—its new application requiring no invention. It is submitted that the reasoning of Buckley, J., was correct. The invention must be of "a new manufacture," and protection will be granted against any method of manufacture of the new product which is substantially similar to that of the patentee. In other words, the construction will be wide, as is usual where a new process is applied to effect a new result.

Where a new principle has been shown newly applied to some new object, the method of application shown will be given a very wide construction by the Courts, and as Wright, J., said: "Such a claim ought probably to be construed as a claim of monopoly for that arrangement carried out by any means substantially similar to those disclosed in the specification" (j).

In the Court of Appeal, Cotton, L.J., speaking on this

(j) *Edison Bell Phonograph Co. v. Smith*, 11 R. P. C. at p. 148.

Claims to applications of new principles have wide scope.

subject, said: "Where there is a principle first applied in a machine capable of carrying it into effect, the Court looks more narrowly at those who carry out the same principle, and say they do it by a different mode, and looks to see whether in effect, although the mode is not exactly the same, it is only a colourable difference, a mechanical equivalent for a substantial part of the patentee's invention being looked upon as a mere colourable difference" (*l*).

The construction of the claim in relation to its ambit will be more fully discussed in Chap. VII. on Infringement.

Subject-matter in the sense of "Invention."

We now turn to the more numerous decisions in which the term subject-matter is used in a somewhat different sense. In this class there is no question that the invention must be classed as a manufacture; frequently also it is admitted or proved that the invention is novel and useful, but it is contended that the step forward taken by the patentee in view of the state of the common knowledge in the art "did not call for any exercise of the inventive faculty," or, more shortly, "did not require invention," and the debate and the decision really turn upon the question whether or not it was *obvious* in view of the common knowledge at the date of the patent. The decisions are therefore really decisions of feeling (*l*)—each judge viewing the invention against the background of his own experience of life. It has often been said that "subject-matter is a question of law, whereas novelty is a question of fact," and it is possible to cull from the reported cases general principles which judges are used to take into consideration when arriving at a decision; nevertheless subject-matter is always the most uncertain issue in patent cases, depending as it does upon the temperament and experience of the judge.

The difference between novelty and subject-matter was stated by Lindley, L.J., as follows (*m*): ". . . In considering subject-matter, novelty is assumed; the question is whether, assuming

(*l*) *The Automatic Weighing Machine Co. v. Knight*, 6 R. P. C. at p. 304; and see *Ashworth v. English Card Clothing Co.*, 20 R. P. C. 790.

(*l*) See p. 52, post.
(*m*) *Gadd and Mason v. Mayor, etc. of Manchester*, 9 R. P. C. at p. 515.

the invention to be new, it is one for which a patent can be granted. In considering novelty, the invention is assumed to be one for which a patent can be granted if new, and the question is whether on that assumption it is new. Has it been disclosed before? If there is an earlier specification for the very same thing, the second invention is not new; but if the two things are different, the nature and extent of the difference have to be considered."

The cases discussed hereafter are cited to define and illustrate the principles which commonly guide the tribunal in deciding whether or not the invention was or should have been obvious to the person skilled in the art at the date of the letters patent in question.

Put quite shortly the law on subject-matter may be stated thus. If the invention is a manufacture, if it is new, if it is useful, and if the judge holds on the evidence that it is one which would not have been obvious to a person skilled in the art and acquainted with the common knowledge in that art at the date of the patent, then it is subject-matter for a grant. For purposes of convenience the questions of utility and novelty will be separately treated.

It will be observed that in the decisions, much use is made of the word "invention." It must not be imagined that the State attaches the slightest importance to what has actually occurred in the mind of an inventor (*n*). Patents have been held valid for inventions that have been the result of the merest accident (*o*), and for inventions imported from abroad. But in considering whether any given invention can be considered obvious or not in the light of prior common knowledge it is necessary to inquire whether in fact the new application would be indicated by an examination of the old application. In considering this question regard must be had to the class of persons to whom the specification is addressed, and who are concerned in the act with which the invention deals. If it can be shown that the new result was long sought for:—if it be shown that persons of this kind had been working

Summary of
law of
invention.

Mind of
inventor
immaterial.

Evidence
required.

(*n*) See Tindal, C.J., in *Crane v. Price*, 1842, 1 W. P. C. at p. 411.

(*o*) See *Liardet v. Johnson*, 1 W. P. C. at p. 54.

Commercial
success.

without success to attain it, and had long regarded it in the light of a problem, and that the invention of the patentee successfully solved the problem,—then such a state of affairs constitutes evidence of the strongest kind that the prior applications did not in fact give a clear clue to the solution and ought not to be considered as destroying subject-matter. What really occurred in the mind of the inventor would be utterly immaterial even if it were discoverable. In *Lyon v. Goldard* (10 R. P. C. at p. 336) Bowen, L.J., said: “When you see that the point of this invention is that it enables a process which has been discovered since, to be carried out in a machine which alone is adapted for that purpose and process, and when you observe the marked and beneficial effect, and the commercial and the scientific success of the new machine, you can only answer the question whether there has been ingenuity in one way. I think, not only that there has been ingenuity, but I think myself that there has been very great ingenuity in it, and none the less because it is easy afterwards, as has been pointed out, to say other people might have seen the result.”

In *Gosnell v. Bishop* (5 R. P. C. at p. 158) Bowen, L.J., said: “Where there has been for some time a long unsatisfied demand, and then suddenly an article springs into existence and satisfies it, the length of time during which the demand has remained uncomplished is matter from which it may be inferred that it is ingenuity alone which has enabled the inventor to surmount the obstacle that otherwise would seem, from the mere existence of the long unsatisfied demand, to have existed somewhere or in some shape. But it may be that the demand itself is quite new, and that the novelty of the demand has produced immediately and without any operation of ingenuity, an obvious article to satisfy it.”

And in *Hinks v. Safety Lighting Co.* (L. R. 4 Ch. D. at p. 615) Jessel, M.R., said: “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" (*p*).

But commercial success alone, without the solution of a difficulty, will not establish subject-matter. For commercial success is often due merely to commercial enterprise, or the awakening of a new demand. The case of *The Haskell Golf Ball Co. v. Hutchinson* (cited below) is an instance in point.

In the case of *Longbottom v. Shaw* (8 R. P. C. at p. 336) Lord Herschell said: "Great reliance is placed upon the fact that when this patent was taken out and frames were made in accordance with it, there was a larger demand for them. . . . I do not dispute that that is a matter to be taken into consideration; but, again, it is obvious that it cannot be regarded in any sense as conclusive. I think that its value depends very much upon certain other circumstances. If nothing be shown beyond the fact that the new arrangement results in an improvement, and that this improvement causes a demand for an apparatus made in accordance with the patent, I think that it is of very little importance."

A useful illustration is to be found in *The Haskell Golf Ball Co. v. Hutchinson*, which turned upon the validity of the patent for the Haskell golf-ball. This patent was held invalid by Mr. Justice Buckley and by the Court of Appeal and the House of Lords. The patented invention consisted of a ball of which the cover was made of gutta-percha, and the core of rubber thread wound under tension into a ball. It had been well known to use gutta-percha as a cover for golf-balls, and it was well known that this material was the only suitable one for such covers. Balls had also been used for other purposes than golf composed of rubber thread wound under tension, and such balls were usually covered with leather. The purpose of the rubber thread core was to impart elasticity; the purpose of the gutta-percha cover was to protect the core and to muffle that elasticity when the ball was given a slight

(*p*) See also Lord Herschell in *American Braided Wire Co. v. Thomson* (The "Bustle Case"), 6 R. P. C. at p. 527; *Bonnard v. London General Omnibus Co.*, 36 R. P. C. 307; *Osram Lamp Works, Ltd. v. Pope's Electric Lamp Co.*, cited at p. 49, post.

blow, as when on the putting-green, where elasticity is a disadvantage. Balls having elasticity were at first regarded with great disfavour by golfers, but ultimately—some four years or so after the grant of the patent—the majority of players came to the conclusion that their use was advantageous. As soon as this change of opinion took place the Haskell ball became a great commercial success, *i.e.*, the success of a particular point of view rather than that of a manufacture.

The judgment of Collins, M.R., demonstrates this aspect of the matter. He said (23 R. P. C. at p. 313): “Now there being that right in every person to play the game with any ball that he found if he chose to do so, what was there open to this gentleman to patent in this case? . . . All that he has done is really, when you come to sift it, that he has substituted for the leather cover, which was the common cover of the balls composed of rubber wound in tension then in use, for the purpose of golf, a cover of gutta-percha. That is the invention. What room was there for invention in taking that step into the unknown?—a step from a cover of leather to a cover of gutta-percha for the purpose of making a ball, fit for other purposes, fit for golf. What did he find to his hand? He found that every ball in the market was a ball made either in whole or in part of gutta-percha. Certainly the external part of it was gutta-percha. It was well known that if you wanted to strike a ball with an iron club probably gutta-percha was one of the best substances you could choose to admit of that impact. It was well known that gutta-percha was a common, or at least a well-known, cover for balls which required a considerable impact from the conditions in which they were used. Under those circumstances, it seems to me that that step, when you have once made up your mind that there was a certain degree of originality in playing golf with an elastic ball, was not the subject of a patent. The idea of putting a cover on strong enough to stand the impact of an iron club, and substituting, therefore, gutta-percha for leather, seems to me not to be one which can be the subject-matter of a patent.” A further illustration is to be found in the case of *Thermos v. Isola* (27 R. P. C. 388).

The cases which involve the application of an old device to a new purpose are many; the following are frequently cited, and usefully illustrate the method of the Courts in approaching the issue of subject-matter. But it must be remembered that the facts in one case are no guide to the treatment of the facts in another save in so far as a statement of them is necessary to illustrate a principle.

In *Thierry v. Rickman* (14 R. P. C. at p. 115) Halsbury, L.C., said: "Whether there is or is not invention such as will support a patent is a question of fact and degree, and the state of facts and degree in one case can never be any guide in another. It is certainly quite true that mere simplicity will not prevent there being invention." He then referred to *Hinks v. Safety Lighting Co.* (L. R. 4 Ch. D. 607) and *Brook v. Aston* (8 E. & B. 478), and continued: "I refer to these two cases only as illustrative of the proposition that no smallness or simplicity will prevent a patent being good, while mere novelty of manufacture or usefulness in the application of known materials to analogous uses will not necessarily establish invention within the meaning of the patent laws."

In *Penn v. Bibby* (L. R. 2 Ch. 127) the invention related to bearings for screw propeller shafts of vessels. The specification described the inner surfaces of the bearings as having grooves to receive fillets of wood which projected to some extent beyond the inner surfaces of the metal bearings, so as to prevent the shaft coming into contact with the metal of the bearings, the spaces permitting water to flow freely between the shaft and the inner surfaces of the metal bearings. Great utility was proved. The nature of the alleged anticipations is shown in the judgment of Lord Chelmsford, L.C., who said: "In every case of this description 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, which cannot be considered an unfair one, to the present case, it appears to me impossible to say that the patented invention is merely an application of an old thing to a new purpose. The

only examples of old use alleged by the defendant were in grindstones and water-wheels. No doubt these have what may be called bearings, but they are of a totally different character and for a totally different object, from the bearings patented. In neither water-wheel nor grindstone is there a wooden bearing in which the wheel revolves, but the wheel is merely supported on wood, not encased or submerged, nor constructed for the purpose of admitting the water to flow freely within the bearing, and the revolutions of each of them are at a very slow pace. 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."

In *Gadd v. The Mayor, &c. of Manchester* (9 R. P. C. 516) the object of the plaintiff's patent was to keep gasometers vertical without having recourse to the external guiding frames generally used; this object was not in itself new, but had never been attained by any method resembling that employed by the patentees. The principle employed by them was one which had previously been described in specifications of inventions for keeping floating docks and pontoons in a horizontal position. It was held by the Court of Appeal, reversing the decision of the Court below, that in the application of that principle to gasometers there were practical difficulties to be overcome which required a considerable degree of ingenuity, and was good subject-matter for a patent. Lord Justice Lindley (at p. 524), after an elaborate review of the authorities, expressed the law upon this subject by the two following propositions: "1. A patent for the mere use of a known contrivance, without any additional ingenuity in overcoming fresh difficulties, is bad, and cannot be supported. If the new use involves no ingenuity, but is in manner and purpose analogous to the old use, although not quite the same, there is no invention: no manner of new manufacture within the meaning of the statute of James. 2. On the other hand, a patent for a new use of a known contrivance is good, and can be supported if the new use involves practical difficulties which the patentee has been the first to see and overcome by some ingenuity of his own. An improved thing produced by a new and ingenious application of a known

contrivance to an old thing, is a manner of new manufacture within the meaning of the statute. If, practically speaking, there are no difficulties to be overcome in adapting an old contrivance to a new purpose, there can be no ingenuity in overcoming them, there will be no invention, and the first rule will apply. The same rule will, I apprehend, also apply to cases in which the mode of overcoming the so-called difficulties is so obvious to every one of ordinary intelligence and acquaintance with the subject-matter of the patent, as to present no difficulty to any such person. Such cases present no real difficulty to people conversant with the matter in hand, and admit of no sufficient ingenuity to support a patent. If, in these two classes of cases, patents could be supported, they would be intolerable nuisances, and would seriously impede all improvements in the practical application of common knowledge. . . . But unless an invention can be brought within one or other of the above classes, a patent for it cannot be held bad on the ground of want of subject-matter" (q). An instance of a patent being held to be invalid as being for the analogous use of an old device, involving no difficulties in its application and consequently requiring no ingenuity, and expressly held to be within Lord Justice Lindley's definition above quoted, is to be found in *Merten's Patent*, 31 R. P. C. 373.

In *Bush v. Fox* (Macr. P. C. at p. 164) Chief Baron Pollock graphically illustrated the point we are now discussing. He said: "I think if one man invents a new mode of looking at the moon, somebody else cannot take out a new patent for looking at the sun. 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 another telescope to be used for taking observations on the sea.'" That case was ultimately confirmed in the House of Lords.

In *Harwood v. G. N. R.* (35 L. J. Q. B. 27) (a case very frequently cited), the patentee used a "fish plate" for joining together the ends of rails. The evidence showed that

(q) See also *Hayward v. Hamilton*, *British Vacuum Cleaner Co. v. L. Griff.* P. C. 115; *Brooks v. and S. W. Ry. Co.*, 29 R. P. C. 309. *Lamplugh*, 15 R. P. C. 33; and

this particular form of joint had been applied in various mechanical contrivances, and notably in the joining together of pieces of timber used in bridge building, with pieces of channelled iron. It was more or less agreed, however, that exactly the same kind of strains were not involved, where the earlier applications were made. But Lord Chelmsford, L.C., said (at p. 38): "Then the question is whether there can be any invention of the plaintiff in having taken that thing, which was a fish for a bridge, and having applied it as a fish for a railway. Upon that I think that the law is well and rightly settled, for there would be no end to the interferences with trades, and with the liberty of any mechanical contrivance being adopted, if every slight difference in the application of a well-known thing were held to constitute a patent. . . . No sounder or more wholesome doctrine, I think, was ever established by the decisions which are referred to in the opinions of the four learned judges, who concur in the second opinion delivered to your lordships, namely, that you cannot have a patent for a well-known mechanical contrivance, merely because it is applied in a manner, or to a purpose which is analogous to the manner, or to the purpose in or to which it has been hitherto notoriously used. The channelled iron was applied in a manner which was notorious, and the application of it to a vertical fish would be no more than the application of a well-known contrivance, to a purpose exactly analogous, or corresponding to the purpose, to which it had been previously applied."

In *Morgan v. Windover* (7 R. P. C. 131) the patent consisted in the application of C springs, which previously had only been employed on the back of a carriage, to the fore part, and arranged so as not to interfere with the fore wheels and their motion in turning the carriage. This contrivance was new, and was admitted to give greater ease and comfort in the motion of the carriage to which it was attached. The patent was upheld in the lower Courts, but these decisions were reversed by the House of Lords, where it was held *nem. con.* that there was not sufficient ingenuity disclosed to support a grant of letters patent. Lord Herschell, in his judgment, said (at

p. 137) : " Now, my lords, if it had required mechanical ingenuity and skill to adapt the composite springs which had hitherto been used in the hind part of a carriage to the fore part of a carriage, so that it was not the mere substitution in front in substantially the same way as the substitution had taken place at the back, but that it needed some skill and ingenuity to adapt to the front part of the carriage that which had been applied to the back, I should have thought that there was sufficient subject-matter, and that the patent could have stood. But when once it is admitted that all that can be claimed as new is the idea of putting it in the front instead of at the back, and that when once that idea was entertained, any workman told to do it would, without any instructions or any special mechanical skill, be able at once to do it, it seems to me that that really concludes the case against the respondents " (r).

The last words quoted from Lord Herschell's judgment must be read with caution and with due regard to the facts of the particular case; it has sometimes been said that in the application of an old device to a new purpose there must be ingenuity, not only in conceiving the idea of the application but in the method of application itself must require ingenuity, and must not be obvious. The wording of Lord Herschell's judgment certainly gives colour to this view. It is more correct, however, to say that there must be ingenuity shown *either* in the conception of the idea *or* in the application of it; in the first case, the broad idea may be claimed; in the second, a narrow claim only may be made in respect of the particular method of application. In *Hickton's Patent Syndicate v. Patents, &c. Ltd.* (26 R. P. C. at p. 347), Moulton, L.J. (supported by Cozens-Hardy, M.R., and Buckley, L.J.), dealt with this point. The invention in question involved a conception by no means obvious, but once it had been conceived it could not be denied that the application was obvious, and Swinfen Eady, J., had held the patent invalid on this ground. The Lord Justice said: " The learned Judge says, 'an idea may be new and original and very meritorious, but

Obviousness
of application
of conception.

(r) And see the judgment of Lord R. P. C. at p. 155; *Blakey v. Davey* in *The Acetylene Illuminating Co., Ltd. v. United Alkali Co.*, 22 *Latham*, 6 R. P. C. 184; and *Dredge v. Parnell*, 16 R. P. C. 625.



unless there is some invention necessary for putting the idea into practice it is not patentable.' With the greatest respect for the learned judge, that, in my opinion, is quite contrary to the principles of patent law, and would deprive of their reward a very large number of meritorious inventions that have been made. I may say that this dictum is to the best of my knowledge supported by no case, and no case has been quoted to us which would justify it. But let me give an example. Probably the most celebrated patent in the history of our law is that of Boulton and Watt, which had the unique distinction of being renewed for the whole fourteen years. The particular invention there was the condensation of the steam, not in the cylinder itself, but in a separate vessel. That conception occurred to Watt, and it was for that his patent was granted, and out of that grew the steam engine. Now, can it be suggested that it required any invention whatever to carry out that idea when once you had got it? It could be done in a thousand ways, and by any competent engineer, but the invention was in the idea, and when he had once got that idea the carrying out of it was perfectly easy. To say that the conception may be meritorious and may involve invention, and may be new and original, and simply because when you have once got the idea it is easy to carry it out, and that that deprives it of the title of being a new invention according to our patent law, is, I think, an extremely dangerous principle, and justified neither by reason, nor authority. . . . In my opinion, invention may lie in the idea, and it may lie in the way in which it is carried out, and it may be in the combination of the two; but if there is invention in the idea plus *the* way of carrying it out, then *it* is good subject-matter for Letters Patent." It is respectfully suggested with regard to the last sentence quoted, that if the antecedent of the "*it*" is "the idea" then the law would be more correctly defined by reading the "the" as "a." As printed in the report, the words of the learned lord justice would seem to suggest that although there might be invention in the idea, invention was also needed in the way of carrying it out—an interpretation quite at variance with the earlier sentences quoted.

It is sometimes said that a selection from possible alternatives for the solution of a problem may afford subject-matter for a patent, but "a mere selection among possible alternatives is not subject-matter. A selection to be patentable must be a selection in order to secure some advantage or avoid some disadvantage. It must be an adaptation of means to ends impossible without exercise of the inventive faculty. It follows that in describing and ascertaining the nature of an invention consisting in the selection between possible alternatives, the advantages to be gained, or the disadvantages to be avoided ought to be referred to" (s).

In the case of patents for chemical and metallurgical processes the principles of law applicable are precisely similar, and in the application of an old and well-known process to a new material the same question arises, that is to say, "was the new application obvious in view of the common knowledge." Some few years ago a distinguished chemist stated when giving evidence in such a case that "there is no prevision in chemistry," and this phrase being since often repeated has given rise in the minds of some to the belief that the law applicable to chemical cases is peculiar. This is not so. True it is that the unexpected nature of chemical reactions often makes a chemist who is aware that things may and do occur contrary to expectation, distrustful of his own belief in what to anticipate, and realise that analogies are dangerous, but the question of obviousness still remains to be decided on the evidence in the particular case (t). The following quotation from the judgment of Lord Parker in *Osram Lamp Works, Ltd. v. Pope's Electric Lamp Co.*, 34 R. P. C. at p. 396, clearly illustrates the modern method of approaching the facts: "I now pass to the objection to the Patent based on want of subject-matter. I agree that the invention consists merely in the application to tungsten and its compounds of a process (previously) invented and disclosed by Dr. Welsbach for making filaments of osmium or other metals of the platinum

(s) Lord Parker in *Clyde Nail Co. v. Russell*, 33 R. P. C. at p. 306; and see Chap. VI., post.

(t) See, e.g., *Osram Lamp Works, Ltd. v. Pope's Electric Lamp Co.*, 34 R. P. C. at p. 396.

group. This is good subject-matter, unless, having regard to what was generally known at the date of the patent sued upon, it was obvious without experiment or research, that the process invented by Welsbach could be applied to tungsten and its compounds as well as to osmium or other metals of the platinum group. I am not prepared to hold that this was obvious. Indeed, all the facts appear to point to the contrary conclusion. Long before the date of Welsbach's specification it was well recognised that if a filament could be made of some cheap hard metal with a high melting temperature, such filament would be free from many of the defects in, and would be likely to supersede, the carbon filaments then in use. The difficulty had been to manufacture such filaments, for hard metals with high melting temperatures are intractable, and cannot, or at any rate could not then, be made by any process of drawing. If a method of manufacturing such filaments could be invented, tungsten, which is plentiful and cheap, would obviously be suitable for the purpose. In 1889 one, *Bottome*, had patented in the U.S. a process for making a filament of mixed tungsten and carbon. In 1897 one, *Lodyguine*, had also patented in America a process in which he proposed to make filaments of platinum and tungsten, the tungsten being deposited round a platinum wire as a base. *Welsbach* was the first to invent a process by which a filament of hard metal could be made, but the fact that his specification mentions only scarcer and dearer metals might well suggest to his readers that his process was inapplicable to tungsten, which was more suitable for the purpose he had in view. I cannot find that in the interval of six years or thereabouts, which elapsed between the date of *Welsbach's* patent and the date of the plaintiff's patent, any one ever suggested this application of *Welsbach's* process to tungsten, although, during that period, one, *Gülcher*, patented in Germany a process for building up an iridium filament, in the same way as *Welsbach* had built up an osmium filament, and although in 1903 *Just* and *Hanaman* obtained in Germany a patent for a process in which a tungsten filament was to be obtained in an entirely different manner. The inference I draw from the facts above

stated is that it was by no means obvious that *Welsbach's* process could be successfully applied to tungsten. The objection based on want of subject-matter must therefore fail." On the other hand, in *British Thomson-Houston Co. v. Duram, Ltd.* (35 R. P. C. 161), the patentees stated that they had discovered that tungsten became ductile if the coherent metal (rendered coherent by any suitable method) were heated, and claimed broadly, "The method of working tungsten which consists in subjecting the metal in a coherent form to the action of heat while it is being operated on or manipulated." It was proved to be the common practice of metallurgists to work metals hot either, to test their properties or in the course of industries, and that to apply such a process to tungsten was obvious.

The application of an old material for a new purpose, or the discovery of a use for an old material formerly thought useless, Old material applied to new purpose. may be the subject of a patent; for instance, *Muntz v. Foster* (2 W. P. C. 96) was an action for an infringement of a patent for the manufacture of metal plates to be used for sheathing the bottoms of ships. The improvement consisted of using an alloy of zinc and copper in certain proportions for the manufacture of the plates, and for this purpose copper alone had hitherto been used. The alloy of zinc and copper was to produce an old and well-known material; still, the application of that old material to sheathing of ships had not before been discovered, and upon its being shown that such an application was a great improvement on the old method of sheathing with copper, it was held that the patent could be sustained.

But it is necessary to establish invention in the patented use of the old material. In *The Albo-Carbon Light Co. v. Kidd* (4 R. P. C. 535) the disputed claim was "The use of solid naphthaline prepared in the form of sticks, rods, or pellets for the enrichment of combustible gas, substantially as herein described." It was shown that the use of naphthaline (though not in solid form) was known for enriching gas, and the existence of solid naphthaline was also old. The method of application described was obvious, and the patent was declared invalid.

The reasoning of the judgment in this case is defective, although on the facts summarised above the decision was justified.

In *McLay v. Lawes & Co.* (22 R. P. C. 199) the invention consisted in utilising the calcium sulphate obtained as a waste product in the manufacture of tartaric acid, in conjunction with agglutinating materials to form a non-conducting "lagging" for boilers. It was proved that the use of calcium sulphate, as obtained from other sources, was well known for this purpose and the patent was held invalid.

Combinations

We have now to deal with the very important part of patent jurisprudence which concerns the validity of patents for new combinations. New combinations of new with old contrivances, or of old contrivances with other old contrivances, are principally to be met with in the field of labour-saving machinery. New principles are rarely met with. Fundamental departures from old methods of manufacture are not so common nowadays as are new arrangements in old machines of their various parts (which in themselves as mechanical appliances are seldom novel) to produce old effects in a better, cheaper, or more expeditious manner. Lord (then Mr. Fletcher) Moulton, in his presidential address (1904) to the Junior Institution of Civil Engineers, in dealing with this fact, said: "It is here that the lawyers' difficulties are greatest. The benefits of the patent laws are confined to inventions, and it therefore becomes necessary, in deciding whether a new machine or a modification of an old machine is good subject-matter for letters patent, to put to oneself the question, 'Does it involve invention?' The decision is not difficult when it involves a new cycle, or a wholly new mechanism for accomplishing an old cycle. But when it consists of an improvement on old mechanism by the substitution of different but equivalent devices, the task is one of great nicety. It would seem to be necessary to fix upon some definition of invention, but this has never been done, and in my opinion no definition of invention can be found which is of the slightest assistance to anyone in a case of difficulty. . . . When you

approach the dividing line it is so impossible to get a test that it becomes, more or less, a matter of personal opinion. Some of the elements of a combination are altered so as to improve, but not essentially change its working. Is that a new invention? If it is only the substitution of mechanical elements which are notoriously the equivalents of the old elements the law is clear, but in any other case it is treated as being a question of fact for the judgment of whatever tribunal has the duty of deciding. Our Courts in this, as in many other questions, lean to the practical rather than the dogmatic. They impose no rigid test such as that to which the German Patent Office inclines, viz., that the new combination must produce a different technical result. To do the same thing better, or in a way so different that it gives to the public a useful choice of means, may with us be sufficient to support the claim to invention. And I have little doubt that if a case should arise in which a judicious selection out of the list of known and notorious mechanical equivalents gave an unforeseen and markedly superior result, the Courts would consider themselves free to hold it to be an invention, and in treating the decision as thus dependent on the resulting utility they would only be following the dictum of Lord Watson: 'There are many things which you cannot say are or are not inventions until you have tried them.'"

It is unnecessary to quote the cases which in the early history of patent law went to establish that patents for new combinations were valid. New combinations are such a feature of modern machinery and of modern patent practice that the principle hardly needs argument. But it is important to remember that the combination must in *fact* be a combination and not a mere juxtaposition—the parts must combine for some common result. As Buckley, L.J., said in *The British United Shoe Machinery Co. v. Fussell* (25 R. P. C. at p. 657), "For this purpose a combination, I think, means not every collocation of parts, but a collocation of inter-communicating parts so as to arrive at a desired result, and to this, I think, must be added that the result must be what, for the moment, I will call a simple and not a complex result. . . ."

Meaning of
"combina-
tion."

It is not every combination of parts which is for this purpose a combination" (u).

The
"Sausage-
machine
Case."

The principle enunciated by Buckley, L.J., is illustrated by the well-known "*Sausage-machine Case*": *Williams v. Nye* (7 R. P. C. 62). The patent in that case was for a machine for mincing meat and filling the minced meat into skins so as to make sausages. In fact it consisted of a well-known form of mincing machine which fed the meat to a well-known filling machine so as to combine in one apparatus two machines which had formerly been used separately. The mincing part performed no more than its already well-known functions, and the same remark is true of the filling part. The ultimate result was novel and useful, but there was no difficulty to be overcome and no invention. The case of *Wood v. Raphael* (13 R. P. C. 730) (*The "Eye-glass Case"*) is another well-known illustration. There the patent was for a new combination of parts in a pince-nez. It was shown that pince-nez with a rigid bridge piece and a spring to cause the glasses to grip the nose were well known. It was also shown that in other forms of glasses the "plaquet" or pieces that come into contact with the side of the nose had been hinged to secure greater adjustability. The plaintiff's improvement consisted in combining the well-known feature of the adjustable plaquet with the well-known glasses with a rigid bridge. Romer, J., said: "It now appears that pivoted plaquets as applied to pince-nez with spring bridges were perfectly well known, their qualities were well known, their advantages and disadvantages; and all that the plaintiff's so-called invention comes to is this: that to a well-known article he has given an additional well-known feature; not to do anything new to the glass as a whole, in my opinion, but merely to give to the original well-known article the well-known qualities of the addition. In my opinion there was nothing novel in the application of that extra feature, or in the purpose for which it was applied; there was no difficulty in adding that additional feature if so desired.

The "Eye-
glass Case."

(u) And see Lord Davey in *Stella Conduit Co.*, 33 R. P. C. at *Klaber's Patent*, 23 R. P. C. at p. 199.
p. 469, and Sargant, J., in *Reed v.*

Certainly no invention was required to add it." This judgment was confirmed by the Court of Appeal (*v*).

There is one field of invention in which the Courts are loth to decide that a new arrangement of parts is not subject-matter, *i.e.*, in automatic labour-saving machinery, where a very small alteration may produce a profound result so far as ultimate success is concerned. In *The British United Shoe Machinery Co. v. Fussell* (25 R. P. C. 631) the patent was for a high speed machine for screwing the soles of boots to the welts. Dealing with this class of machine, Fletcher Moulton, L.J., said (at p. 646): "Its merit is that it does this operation at a high speed, and with unvarying accuracy, so that you can work these machines so as to yield a huge output without making wasters. That is the commercial definition of a high speed machine. . . . When you come to a machine of this type, you have to alter very seriously the canons which influence you in deciding such questions as novelty. In the case of operations which have to be done under normal circumstances, in the absence of any special difficulties arising from speed, small and trivial alterations in the apparatus are viewed with suspicion, as possibly being idle variants; but when you come to machines which with this demand upon them still give uniform success, I think any tribunal will be very careful before it applies its ordinary ideas of what are mere idle and trivial changes to those alterations which have resulted in a success so triumphant. So that I approach the consideration of novelty in this case, *i.e.*, of the importance of apparently slight variations in the combination, in a very humble spirit, willing to be taught by those who know the practical performance of the machine, and are able to judge of the means which render that practical performance so successful."

It is essential to remember that the new combination is what constitutes the subject-matter of the patent, whether the invention in *fact* be the addition of a new element or the subtraction of an old element theretofore considered necessary,

(*v*) 14 R. P. C. 496. See also *Layland v. Boldy*, 30 R. P. C. 547.

and it is the new combination which should be claimed as the subject of monopoly (see Chap. IV.).

Patent of addition.

Sect. 19 of the Act of 1907 is as follows: (1) "*Where a patent for an invention has been applied for or granted, and the applicant or the patentee, as the case may be, applies for a further patent in respect of any improvement in or modification of the invention, he may, if he thinks fit, in his application for the further patent, request that the term limited in that patent for the duration thereof be the same as that of the original patent or so much of that term as is unexpired.*"

And by sub-sect. 4: "*The grant of a patent of addition shall be conclusive evidence that the invention is a proper subject of a patent of addition, and the validity of the patent shall not be questioned on the ground that the invention ought to have been the subject of an independent patent.*"

Subject-matter limited.

The wording of sub-sect. 4 is important; it does *not* mean that the grant of a patent of addition is conclusive as to the existence of subject-matter or novelty (*w*), but only that the form of the patent cannot be attacked. The subject-matter of a patent of addition, therefore, like that of other patents, must be a new manufacture as defined by the Statute of Monopolies, but it is limited to improvements and modifications of the original invention—*i.e.*, to inventions which would be infringements of the first patent; and in effect the new legislation is merely a relief to inventors against the burden of taxation in respect of every new improvement they may make in their inventions. Hitherto an inventor has been forced either to take out fresh patents for each improvement or to run the risk that others who, having learnt the groundwork and principle from him, may blackmail him by patenting some small but useful improvement.

(*w*) See, *e.g.*, *Rochford v. Dublin Theatre Co., Ltd.*, 29 R. P. C. 185.

CHAPTER IV.

NOVELTY.

HAVING now considered the interpretation which has been placed by the Courts upon the word "manufacture," we next examine what has been held to be a "new manufacture," that is to say, to what extent "prior user" or "prior publication" will invalidate a patent. It is evident that, if the alleged new manufacture can be shown to have been in the possession of the public before the application for the grant of letters patent, there is no consideration for the grant. The patentee offers to the public, in return for the monopoly privilege, his information and knowledge respecting a new manufacture; if the public is already possessed of the information or knowledge, the supposed inventor has nothing to give. We shall see, hereafter, when we discuss the practice of the Courts in actions for the infringement of patents, that the burden of proof lies on the infringer when he sets up a defence of want of novelty in the alleged manufacture at the date of the patent; and it is as well to keep this in mind in reading the cases which have been decided as to what amounts to prior user or publication.

We have seen that the Statute of Monopolies is a mere declaration of that which was the law before it was passed; it was always held by the Courts that the principle of a patent grant was not an arbitrary advantage granted by the Crown to one subject in detriment to the rest, but that it was an advantage granted by the Crown to persons who introduced a new manufacture, and that it was granted upon principle, not for the benefit of the patentee, but for the benefit of the public: it being considered to the benefit of the public that reasonable encouragement should be given to inventors to induce them to devote their time, energies and resources to the improvement

of the arts and manufactures of the realm. Consequently the defendant to an action for infringement has always been entitled to allege the invalidity of the plaintiff's patent on the ground of want of novelty.

At common law.

In the case of *Hasting's Patent* (1567, 1 W. P. C. 6) the patent was in consideration of the patentee having brought into the country the making of frisadoes as they were made in Haarlem, in Amsterdam, being not used in England. The infringers defended the patentee's bill in the Exchequer Chamber, on the ground "that they had made baies very like to Mr. Hasting's frisadoes, prior to the date of Mr. Hasting's patent; they were therefore not restrained from making baies like his frisadoes." A patent was granted to "one Humphrey, of the Tower, 'for the sole and only use of a sieve or instrument for melting of lead, supposing it was his own invention, and therefore prohibited all others to use the same for a time'; and because others used the like instrument in Derbyshire, contrary to the intent of his patent, therefore he did sue them in the Exchequer Chamber by English bill, in which Court the question was whether it was newly invented by him, whereby he might have the sole privilege, or else used before at Mendip, in West country, which if it were there before used then the Court were of opinion that he should not have the sole use thereof" (a).

Novelty means so far as public is concerned.

When we speak of an invention being new, we mean that it must be new so far as the public is concerned, that is, so far as the means of information of the public goes, and the means by which the public become possessed is immaterial (b). The law on this point was laid down by Lord Blackburn, in *Patterson v. Gas Light and Coke Co.* (L. R. 3 A. C. 244), in the words of Mr. Hindmarch (p. 33): "If the public once become possessed of an invention by any means whatever, no subsequent patent can be granted for it, either to the true and first inventor himself, or to any other person, for the public cannot be

(a) And see the account of the "Case of Monopolies," in Mr. Gordon's well-known work "Monopolies by Patent."

(b) Subject to the qualification introduced by sects. 41 and 45 of the Act of 1907; see pp. 72 and 76.

deprived of the right to use the invention, and a patentee of the invention could not give any consideration to the public for the grant, the public already possessing everything that he could give.' It is not necessary that the invention should be used by the public as well as known to the public. If the invention and the mode in which it can be used has been made known to the public by a description in a work which has been publicly circulated (*Stead v. Williams*, 7 M. & G. 818, 842); or in a specification duly enrolled (*Bush v. Fox*, 5 H. L. C. 707; *Betts v. Menzies*, 10 H. L. C. 117); it avoids the patent, though it is not shown that it ever was actually put in use. It is true that the latter case establishes that 'an antecedent specification ought not to be held to be an anticipation of a subsequent discovery, unless you have ascertained that the antecedent specification discloses a practicable mode of producing the result which is the effect of the subsequent discovery'" (c).

Therefore, the question of whether the invention is new or not is one of fact, and depends on the circumstances in every case (d). Is question of fact.

Having stated the general principles upon which a patent may be attacked for want of novelty, we may now proceed to deal particularly with cases of "Prior User," in which it is alleged that the invention has been previously put into practice within the realm. (That the invention has been put into practice in a foreign country or in a colony will not invalidate the patent—for a patent may be obtained for importing an invention from abroad.) The prior user must have been public, and the question of the extent of publicity required gives rise to considerable difficulties. Prior user.

The making of a machine by a person who kept it secret would not amount to such a publication as would anticipate the invention of the patentee; but if the first-made machine had been used in such a manner that other persons had been enabled to acquire the knowledge of its use and application, there would be a prior user to void the subsequent patent.

(c) See also *Lister v. Norton*, 3 R. P. C. at p. 211; *Westley, Richards & Co. v. Perkes*, 10 R. P. C. at p. 193; *Robertson v. Purley*, 24 R. P. C. 299. (d) *Pickard v. Prescott*, 9 R. P. C. at p. 200.

In *Carpenter v. Smith* (1 W. P. C. 530; 9 M. & W. 300), the patent sued on was for a lock. The defendant called a witness who proved that a similar lock had been used on a gate adjoining a public road for sixteen years prior to the patent. It was held that this invalidated the patent. Lord Abinger, C.B., analysed the meaning of the words "public use." "Public use does not mean a use or exercise by the public, but a use or exercise in a public manner." In *Taylor's Patent* (1896, 13 R. P. C. 482) the patent was for a fire-grate. It was revoked on the ground that a similar grate had been used in a private house in the ordinary way and under no conditions of secrecy.

In *Stead v. Anderson* (1846, 2 W. P. C. 147) the alleged prior user consisted in the use on a private carriage drive, the principal approach to a private house, of the kind of paving for which the patent was granted, and Baron Parke placed some considerable limitation on the meaning of the words "public use" in saying, "If the mode of forming and laying blocks at Sir W. Worsley's had been precisely similar to the plaintiff's, that would have been sufficient user to destroy the plaintiff's patent, though put in practice in a spot to which the public had not free access" (c).

Whether the mere manufacture of an article will or will not amount to a "public user" depends upon the circumstances under which it was carried on.

Miller's Patent (15 R. P. C. 205) was granted for the manufacture of an alloy containing bismuth. The petitioners proved that there had been public sales of a similar alloy, called "Magnolia Metal," before the date of the patent, and that a skilful chemist could by analysis have detected its composition. Romer, J., revoking the patent, said (p. 211): "The bismuth could have been detected, and I am satisfied that, if reasonable care and reasonable skill were used by analysts before the date of this patent, when this magnolia metal was sold, its constituents and the proper proportions of those constituents could have been ascertained, so that, the metal being sold, its constituents and their proportions could have been known, and it

(c) And see *Humpherson v. Syer*, 4 R. P. C. 407.

Prior
manufacture
and sale of
chemical
substance.

could have been made, there was no difficulty, I wish to point out, and no secret or invention in making the alloy, when once you knew the constituents and the proportions of those constituents. . . . So that you have a public sale of a metal, as I am pointing out, not of a metal made by any secret process at all, but a public sale of a metal, which if any one wanted to find out what it was made of, and how it was made, he could have done so without difficulty by analysis." This judgment was approved and followed by the House of Lords in the case of *Stahlwerk Becker's Patent* (36 R. P. C. 13), where the patent was granted for the manufacture of a high-speed tool steel having a certain chemical composition. It was proved by the petitioners for revocation that they had made small quantities of steel of the patented composition before the date of the patent, and had put it on the market under one of their ordinary trade marks without calling attention to its properties or composition. It was admitted by the patentees that the composition could have been detected by analysis, but they contended that in order to invalidate the patent the petitioners must show either that the steel had in fact been analysed by some member of the public, or at least that the circumstances were such that there was a high degree of probability that such analysis would have been made in the course of business. Lord Finlay, L.C., said: "I think it would be very dangerous to introduce the doctrine which your lordships are now invited to introduce, either that it must be actually shown that the knowledge had been acquired by some individual, or that there is a high probability that it had in fact been acquired. The law as to prior user seems to be this, that if the article has been manufactured and sold, that gives the means of knowledge to the purchaser, and that that is enough to establish prior user."

The remarks of Lord Bramwell, in *Hills v. London Gaslight Co.* (5 H. & N. at p. 336), on this subject were as follows: **Prior secret user no anticipation.**

"If a person has invented anything which is the subject of a patent, and has kept it to himself or communicated it privately to one or two, in fact has not made it public knowledge, if any one else discovers that invention it is new, that is to say,

new in the sense that the first invention has not been published."

Dollond's Case.

In *Dollond's Case* (*f*) the objection to Dollond's patent was that he was not the inventor of the method of making new object-glasses, but that Dr. Hall had made the same discovery before him; but it was held that, inasmuch as Dr. Hall had confined it to his closet, and the public were not acquainted with it, Dollond was to be considered the inventor.

Experiments.

An abandoned experiment is not a prior publication by user (*g*). In every case the question to be decided is one of fact, and the fact of abandonment gives rise to the inference that the user was experimental only—an inference which may of course in some cases be rebutted.

Experiments with assistants.

There are many inventions which cannot be perfected unless the inventor employs assistance, and experiments of this nature in the course of which the spectators and assistants are under an obligation of secrecy do not amount to a prior publication of the invention even though the experiments prove successful.

In *Morgan v. Seaward* (see 2 M. & W. at p. 557) the patent granted to *Galloway* and assigned to *Morgan*, the plaintiff, was for paddlewheels of a peculiar construction. Before the date of the patent, *Curtis*, an engineer, made for *Morgan* two pairs of wheels upon the principle mentioned in the patent, at his own factory; *Galloway*, the patentee, gave the instructions to *Curtis* under an injunction of secrecy, because he was about to take out a patent. The wheels were completed and put together at *Curtis's* factory, but not shown or exposed to the view of those who might happen to come there; after remaining a short time, the wheels were taken to pieces, packed up in cases and sent to Venice, to be used by a company, of which *Morgan* was a director. *Morgan* paid *Curtis* for the wheels with the knowledge of *Galloway*. Dealing with these facts, Parke, B., said (p. 558): "The wheels were constructed under the direction of the inventor, by an engineer and his servants, with an injunction

(*f*) 1766, unreported, but mentioned with many others in 1 W. P. C. at p. 43.

(*g*) *Cornish v. Keene*, 1 W. P. C.

at p. 508; *Galloway v. Bleaden*, 1 W. P. C. at p. 525; *Walton v. Bateman*, 1 W. P. C. at p. 619.

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 was disclosed, indeed, to *Morgan*, the plaintiff, but there is sufficient evidence that *Morgan* at that time was connected with the inventor, and designing to take a share of the patent. A disclosure of the nature of the invention to such a person, under such circumstances, must surely be deemed private and confidential. The only remaining circumstance is, that *Morgan* paid for the machines with the privity of Galloway on behalf of the Venice Company, of which he was director, but there is 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; and the question is, whether this solitary transaction, without any gain being proved to be derived thereby to the patentee or to the plaintiff, be a use or exercise in England, of the mode of construction, in any sense which can be deemed a use by others, or a public use, within the meaning of the statute and the patent. We think not" (*h*).

In *Newall v. Elliott* (see 4 C. B. N. S. at p. 295) the Court had to deal with a plea of prior user in which the invention (relating to cable laying) was of such magnitude that only experiment upon a scale which was commercial and remunerative would have been and was in fact of use. Byles, J., said: "The experimenter is obliged either to experiment in a way that may turn out to be useful in the particular instance, or else not to make any efficient and decisive experiment at all. The coincidence of an experiment with actual immediate profit or advantage from it, if successful, is unavoidable."

On the other hand, if the use of the invention is conducted in such a way that persons under no obligation of secrecy have access to it, the inference is that such a use is not an experiment

(*h*) See also *Bentley v. Fleming*, 1 C. & K. 587.

and will amount to a prior user (i). In this connection it is important to observe the effect of the proviso introduced by the Act of 1919 into sect. 41, sub-sect. (2), which will be dealt with at p. 74, post.

Secret profit-
able user by
patentee.

It is probable that an inventor who manufactured an article by a secret process and sold it would be unable subsequently to obtain a patent for the process, since by that means he would be enabled to derive a larger advantage than the law allows him in a monopoly for sixteen years from the date of application. The point is not without difficulty and has never been definitely decided. It has, however, received the attention of judges. Baron Parke, in *Morgan v. Seaward* (2 M. & W. at p. 559; 1 W. P. C. at p. 194), said: "For if the inventor could sell his invention, keeping the secret to himself, and, when it was likely to be discovered by another, take out a patent, he might have practically a monopoly for a very much longer period than fourteen years." Romer, J., in *Miller's Patent* (15 R. P. C. at p. 213), said: "I think it might be said to be still open in some respects for further consideration by the Court whether a person who discovers a secret process and uses the benefit of that secret process to manufacture an article which he sells publicly and commercially, and obtains considerable benefit from it, and then seeks to obtain a patent for that very same process, is entitled to hold that patent under those circumstances." It may be said, perhaps, that the common law contemplated bona fides on the part of the inventor, and a bonâ fide discovery of the invention to the public within a reasonable time, and that the working of the invention in secret and subsequent application for the patent was strong evidence of mala fides, and consequently would avoid the patent on the ground of a constructive fraud upon the public.

Secret process
and sale of
product by
others.

A greater difficulty arises in the case of secret use by some one other than the patentee. In *Robertson v. Purdey* (24 R. P. C. at p. 290) Mr. Justice Parker, dealing with an alleged prior user, found in fact that the article had been

(i) *Elias v. Grovesend Tinplate Co.*, 7 R. P. C. 455, at p. 466; *Hoe v. Foster*, 16 R. P. C. 33; *Poulton's Patent*, 23 R. P. C. 184.

manufactured prior to the date of the plaintiff's patent, but had only been used privately, and that such prior private use was not such as to invalidate the plaintiff's patent, but went on to say: "It was, however, argued that on the words of the 6th section of the Statute of Monopolies, 'which others at the time of making such letters patent shall not use,' there may be a contemporaneous user not amounting to publication which will avoid letters patent. In my opinion this argument is well founded. Suppose A. invents a process for the manufacture of dyes, keeps the process secret, and continues to manufacture and publicly sells dyes manufactured according to the process, the sale of the dyes, which might be made by any process, may not amount to a publication of the invention, but I think that A. is using the invention in such a way as to preclude B., who subsequently makes the same invention, from obtaining valid letters patent in respect thereof. This, at any rate, would appear to be the effect of the judgments of Mr. Justice Erle and Lord Justice Campbell in *Heath v. Unwin* (2 W. P. C. at pp. 227, 228; 3 E. & B. at pp. 272, 273), and *Tennant's Case* (1 W. P. C. 195)." The above quoted observations are of course *obiter dicta*, and against the view expressed by Mr. Justice Parker the argument may be urged that patents are granted as a reward for the instruction of the public in a new and useful art, and that until the public are in possession of the knowledge secretly made use of, it is open to any one to reap the reward for communicating it to them. It may be fairly replied to this answer that more than one person may be carrying on the process secretly, and consequently, unless the word "others" is to be construed strictly to mean "any other person," a great difficulty in administering the law is involved, since it will be impossible to find any fixed line beyond which the *public* may be said to be in possession of an invention.

The question is really one of policy, but the opinion of Mr. Justice Parker certainly seems correct upon a strict construction of the words "which others at the time of making such letters patent shall not use."

The prior sale of an article, even though to one individual only, will nearly always be sufficient to invalidate the patent,

since such sale is strong evidence that the user was commercial and not experimental (*j*). In order for the sale to constitute sufficient evidence, it should be open and in the ordinary way of business (*k*). The fact that there was no demand for the article will not affect the sale either in law or fact (*l*). It will be sufficient if only one article be sold (*m*), and, apparently, if merely for export (*n*). An offer to sell, even though no sale was effected, will also be evidence of prior publication (*o*).

Sending out of samples.

The manufacture and sending out of samples for the purpose of experimenting as to the satisfactory character of the invention has been held to amount to a publication (*p*).

By sect. 41, sub-sect. 2, of the Act of 1907, the inventor has been protected against fraudulent disclosure of his inventions by persons with whom he might have confidential relations:—

Disclosure without consent of patentee.

(2) “*A patent shall not be held to be invalid by reason only of the invention in respect of which the patent was granted, or any part thereof, having been published prior to the date of the patent, if the patentee proves to the satisfaction of the Court that the publication was made without his knowledge and consent, and that the matter published was derived or obtained from him, and, if he learnt of the publication before the date of his application for the patent, that he applied for and obtained protection for his invention with all reasonable diligence after learning of the publication. Provided that the protection afforded by this sub-section shall not extend to a patentee who has commercially worked his invention in the United Kingdom otherwise than for the purpose of reasonable trial of the invention prior to the application for the patent.*”

(*j*) *Wood v. Zimmer*, Holt, N. P. R. P. C. 13.
58; 1 W. P. C. 44.

(*k*) *Honiball v. Bloomer*, 2 W. P. C. 199; *Lister v. Norton*, 3 R. P. C. at p. 208, and see *Morgan v. Seaward*, *supra*.

(*l*) *Losh v. Hague*, 1 W. P. C. 205; and see *Lister v. Norton*, 3 R. P. C. at p. 208.

(*m*) *Honiball v. Bloomer*, 2 W. P. C. 200; *Stahlwerk Becker's Patent*, 36

(*n*) *Carpenter v. Smith*, 1 W. P. C. at p. 536. (But *cf. Morgan v. Seaward*, quoted on p. 62, *ante*.)

(*o*) *Oxley v. Holden*, 8 C. B. N. S. at p. 704; *Mullins v. Hart*, 3 C. & K. 297.

(*p*) *Hudson, Scott and Sons, Ltd. v. Barringer and others*, 23 R. P. C. at p. 87.

The proviso was added by sect. 13, sub-sect. (1), of the Act of 1919, and by sub-sect. (2) of that section the proviso is *not* to apply to patents granted before 23rd of December, 1919. The words "*otherwise than for the purpose of reasonable trial*" have been expressly inserted in order to deal with cases where the magnitude of the industry with which the invention deals (as for example newspaper printing machinery) is such that a trial to be reasonable must be on a commercial scale (and see p. 62, ante). Sect. 15, sub-sect. (1), enacts "*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.*"

Formerly the law was such that although a confidential communication did not invalidate a subsequent patent, yet if the person to whom the confidential communication was made published his information the patent was anticipated. It is to be observed that the onus of proving the relieving circumstances is cast entirely on the shoulders of the patentee.

Another description of anticipation which is capable of invalidating a patent is prior publication in a document, *i.e.*, the printing, writing, or publishing of some document to which the public have access, containing such a description of the invention as will enable the invention to be carried into effect from the description given. Vague hints or descriptions of experiments, incomplete or imperfect, are not sufficient to invalidate a subsequent patent. It is not necessary that that which is described in the book or publication should have been carried out in practice; it equally anticipates the patent. The question will always be one of fact, depending on the circumstances of each particular case.

In *Von Heyden v. Neustadt* (50 L. J. Ch. at p. 128) the defendants pleaded anticipation, and put in evidence a mass of paragraphs extracted from a large number of publications. James, L.J., in his judgment, said: "We are of opinion that if it requires this mosaic of extracts, from annals and treatises spread over a series of years, to prove the defendants'

Anticipation
in writing.

contention, that contention stands thereby self-condemned. . . . And even if it could be shown that a patentee made his discovery of a consecutive process by studying, collating and applying a number of facts discriminated in the pages of such works, his diligent study of such works would as much entitle him to the character of an inventor as the diligent study of the works of nature would do."

Lord Westbury's dictum.

In *Hills v. Evans* (4 De G. F. & J. at p. 289 ; 31 L. J. Ch. 463) Lord Westbury said: "The antecedent statement must, in order to invalidate the subsequent patent, be such that a person of ordinary knowledge of the subject would at once perceive and understand and be able practically to apply the discovery without the necessity of making further experiments."

Effect modified by later judgment.

The effect of this statement has, however, been slightly modified by subsequent judgments.

In *Philpott v. Hanbury* (2 R. P. C. at p. 43) Grove, J., said: "What I am going to say now is an expression of opinion that is rather obiter. . . . As a matter of fact my opinion is . . . that there is not the same necessity for accurate description of how an invention shall be carried into effect, for the purpose of anticipating an invention, as there is for the purpose of sustaining a patent in the hands of a patentee, because in the latter case a description ought to be given which ought not to merely inform the minds of every skilled person or scientific person in the trade, but should inform the minds of ordinary people who are accustomed to work at the trade. Therefore I think that there is a distinction; but I am willing to rest my definition or description of what anticipates a patent on this, that there must be a publication which when read by persons versed in the trade, skilful and well acquainted with the trade (I might even limit it, perhaps, to those in the trade who are most skilled—the higher class of skilled workmen), would enable them to understand it. If it be such it anticipates the patent. If it is a mere suggestion, if it is so erroneous in the description that they cannot, by reasonable application of the mind, find out what it means, it does not anticipate the patent."

And the same thing was better said by Lord Watson, in *King, Brown & Co. v. The Anglo-American Brush Light Co.* (9 R. P. C. at p. 320): "Every patentee, as a condition of his exclusive privilege, is bound to describe his invention in such detail as to enable a workman of ordinary skill to practise it, and the penalty of non-compliance with that condition is forfeiture of his privilege. His patent right may be invalid by reason of non-compliance; but it certainly does not follow that his invention has not been published. His specification may, notwithstanding that defect, be sufficient to convey to men of science and employers of labour information which will enable them, without any exercise of inventive ingenuity, to understand his invention, and to give a workman the specific directions which he failed to communicate. In that case, I cannot doubt that his invention is published as completely as if his description had been intelligible to a workman of ordinary skill." This statement was accepted by Lindley, L.J., in *Savage v. Harris*, 13 R. P. C. at pp. 368, 369, as modifying and correcting the view of Lord Westbury in *Hills v. Evans*. The view of the Court seems to be that the knowledge of "the ordinary workman" to whom a specification is addressed is not necessarily the measure of public knowledge.

On the other hand, great caution must be exercised in coming to the conclusion that a given publication or prior user is an anticipation, and it must not be assumed that there is invalidity owing to prior publication merely because a person of great skill might turn the prior publication to practical account. Regard should be had to the observations of Lord Justice Moulton (cited at pp. 52 and 55, ante) concerning labour-saving machinery. Moreover, the distinction drawn by Grove, J., and Lord Watson has not invariably been made; for instance, in *Kaye v. Chubb* (4 R. P. C. at p. 298) Lord Esher, M.R., said: "I quite agree with what has been stated as to the law by Lord Westbury. If in the first patent which is thus alleged there is a general statement which gives no clear intimation either by its own construction or by that mode of putting construction upon patents—namely, by considering what would be the effect of it upon a hypothetical workman of ordinary skill—if it is so

general that, neither by its own construction nor that adapted mode of construction, it would lead to any clear conclusion at all either as to the result or as to the means, and if some other person coming with great skill and great care should, out of the general words, really produce something not inconsistent with them, but which is not disclosed by them, I quite agree that he can take out a patent, and he cannot be defeated, because that which is really his invention can be got within general words which describe nothing."

The reader is referred to the chapter on Subject-matter for consideration of the leading cases in greater detail; it is undesirable to repeat the arguments there set forth. It must be remembered that novelty is a question of *fact*, and a decision as to what may be a sufficient anticipation in any particular case cannot be any guide in deciding upon a different set of circumstances.

The cases which have been decided have generally been upon the subject of antecedent publication by means of a specification, but it is evident that the publication of a book or newspaper, or in any other form which gives the public a means of information, is equally potent as an anticipation of a subsequent patent.

Publication
of the
document.

It is not necessary that the book containing the description of the invention should be sold so as to constitute an anticipation. Mere exhibition in a bookseller's window for sale is sufficient publication, or sending it to a bookseller's in this country to be published (*q*). "There is no difference between a foreign inventor and an English one if, when the inventor is a foreigner, he publishes the book in a foreign language and sends it over to the booksellers in this country for the purpose of being sold" (*r*).

It is the practice for the Patent Office library to receive copies of foreign specifications from abroad and to bind them in volumes which are open to public inspection. An English patent may be invalidated by the fact that such a specification, or in fact any other publication containing the description, was

(*q*) *Lang v. Gisborne*, 31 Beav. 133.

(*r*) Per Sir John Romilly, M.R., in *Lang v. Gisborne*, 31 Beav. at p. 136.

on view prior to the date of the English application (s). Prior publication in a foreign journal and in a foreign language will invalidate an English patent if it can be shown that a single copy was deposited in England in a public place, and was open to public inspection.

In *Otto v. Steel* (L. R. 31 Ch. D. 241), where a French *Otto v. Steel.* treatise was placed in the British Museum library in 1863, it was held by Pearson, J., that having regard to the arrangements of the library there was no prior publication in England of matter contained in the treatise so as to avoid a patent taken out in 1876. The library arrangements were as follows: There was no access to the public to any part of the library of the British Museum beyond the reading room. The public had access to the general catalogue and to books of reference kept in the reading room. In the general catalogue of the British Museum the printed books were referred to under the names of their authors. The treatise in question was entered in the catalogue under the name of Beau de Rochas, and in no other place. It was itself kept in an inner room, and it could only be obtained by one of two means, either by some person knowing of the book and writing the name of the book on a piece of paper and requesting that the book might be furnished to him; or if a reader wanted to find something on a particular subject, and went to the superintendent and asked what books there were that he had better read. The superintendent, if not able to give the information, would direct one of the assistants to take him to that section of the library where such books were likely to be found, and would desire him to let the reader look over the titles of those books, and select what book he pleased out of that section of the library (t).

In *Harris v. Rothwell* (4 R. P. C. at p. 232) Lord Justice Lindley, reading the judgment of Lord Justice Cotton and himself, after an elaborate review of the authorities, said:

(s) *Harris v. Rothwell*, L. R. 35 Ch. D. 416; 56 L. J. Ch. 459; 56 L. T. 552; 3 R. P. C. 383; 4 R. P. C. 225; *Pickard v. Prescott*, 9 R. P. C. 195.

(t) See also *Plimpton v. Malcolmson*, L. R. 3 Ch. D. 531; 44 L. J. Ch. 257; 45 L. J. Ch. 505; *Plimpton v. Spiller*, L. R. 6 Ch. D. 412; 47 L. J. Ch. 211.

“The conclusion at which I have arrived, and which in my judgment is most in accordance with the authorities, and the principles which underlie them, may be thus expressed. *Prima facie*, a patentee is not the first inventor of his patented invention if it be proved that before the date of his patent an intelligible description of his invention, whether in English or in any other language commonly known in this country, was known to exist in this country, either in the Patent Office or in any other library to which the public are admitted, and to which persons in search of information on the subject to which the patent relates would naturally go for information. But if, as in the *Plimpton* cases and in *Otto v. Steel*, it be proved that the foreign publication, although in a public library, was not in fact known to be there, the unknown existence of the publication in this country is not fatal to the patent.”

Publication
by drawing.

A patent for a machine may be anticipated by a drawing of it unaccompanied by explanatory letterpress if published in a book or elsewhere so that it could become generally known, provided that any machinist would understand it, and could make the machine from the drawing without any further information, and without the exercise of ingenuity (*u*).

The publication in a prior specification is conclusive against a subsequent patent, since the object of a specification is to publish to the world.

By sect. 7 of the Act of 1907 the Patent Office is directed to make a search as to the novelty of all applications. The search is only to extend to specifications published within fifty years next before the date of the application.

Rule as to
fifty-year-old
specifications.

By sect. 41, sub-sect. 1, it is enacted: “*An invention covered by any patent applied for on or after the first day of January one thousand nine hundred and five (v) shall not be deemed to have been anticipated by reason only of its publication in a specification left pursuant to an application made in the United Kingdom not less than fifty years before the date of the application for the*

(*u*) *Herrburger v. Squire*, 6 R. P. C. at p. 198; *Electric Construction Co. v. Imperial Tramways Co.*, 17 R. P. C. at p. 550.

(*v*) On account of the similar section (2) of the Act of 1902, which came into force on January 1st, 1905.

patent, or of its publication in a provisional specification of any date not followed by a complete specification."

Therefore, as to inventions patented after the 1st of January, 1905, any anticipation may be alleged that would formerly have been available, save a provisional specification not followed by a complete specification (such have not been published since 1884), and a person who alleges invalidity may not rely solely upon a specification published fifty years before the application. But it is submitted that he could use the fifty-year-old specification as evidence to support an allegation of prior user (*w*). The effect merely seems to be to take away the conclusive nature of such a specification as prior publication. The Patent Office search does not preclude any one from attacking the validity of the patent by means of a specification which the Office may have overlooked (sect. 1, sub-sect. 9). With regard to applications filed before the commencement of the Act, the old law applies.

At one time it was questioned whether the abandonment of a provisional specification would invalidate a subsequent applica-
Abandoned
prior appli-
cation.
tion. It must be remembered that the Court has power to order the production of a provisional specification, filed on an abandoned application not as an anticipation, but as evidence to establish a prior user, and in the interests of justice. This was done by Mr. Justice Wills in *Pneumatic Tyre Co. v. The English Cycle and Tyre Co.* (14 R. P. C. at p. 852). In *Oxley v. Holden* (8 C. B. N. S. 666) it appeared that on the 17th March, 1858, the plaintiff obtained provisional protection for an invention of indiarubber pads to be applied to the windows of carriages. On the 10th April, 1858, he obtained a second provisional protection for three heads of invention, whereof one comprised the above-mentioned indiarubber pads. The first application was abandoned, and the specification filed in support of it was not published, and the second was carried to completion—*there was no evidence that between the date of the first application and the second the invention had in any way*

(*w*) See, on a somewhat similar principle, *The English Cycle and Tyre Co.*, 14 R. P. C. at p. 852.

been put in practice or published : held, that the first application did not invalidate the patent.

Sect. 4. of the Act of 1907 is as follows : *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 invention ; and such protection from the consequences of use and publication is in this Act referred to as provisional protection.*" Here "such patent," which is not to be invalidated, is the patent for which the particular application is made. Hence the abandonment of an application for provisional protection will not invalidate a subsequent application for the same invention (*Oxley v. Holden* (supra)); but if the invention is put into practice between the filing of the two provisional specifications, the second patent will be void on the ground of prior user merely.

Abandoned .
specifications
not published.

By sect. 69, sub-sect. 1, it is enacted that specifications filed in pursuance of applications which are subsequently abandoned are not to be published save in the case of applications under the Convention.

Effect of
want of
novelty in
part.

Hitherto the consideration for a grant of letters patent has been considered as entire and indivisible ; consequently, where two or more mechanisms or processes were claimed in one specification, the want of novelty of one would avoid the whole (x). Sect. 9 of the Act of 1919, however, has effected a very important change in the law. A new section, 32A, was, by it, inserted in the principal Act to the following effect :—

"Notwithstanding anything to the contrary appearing in section twenty-three of this Act, if the Court in any action for infringement of a patent finds that any one or more of the claims in the specification, in respect of which infringement is alleged, are valid, it shall, subject to its discretion as to costs and as to the date from which damages should be reckoned, and to such terms as to amendment as it may deem desirable, grant relief in respect of

(x) *Brunton v. Hawkes*, 4 B. & Ald. 541; *Morgan v. Seaward*, 1837, 2 M. & W. 544; 1 W. P. C. 196; *Patterson v. Gas Light and Coke Co.*, L. R. 2 Ch. D. 812, 833.

any of such claims which are infringed without regard to the invalidity of any other claim in the specification. In exercising such discretion, the Court may take into consideration the conduct of the parties in inserting such invalid claims in the specification or permitting them to remain there."

The effect of this section is not that it makes valid claims formerly invalid, but that relief is granted against some of the consequences of such invalidity, and it may therefore still be important to an infringer to show that a claim of a patent is invalid in order to avoid the full consequences of damages and cost which might otherwise follow.

Where one of the claims is but subsidiary to the rest and does not in any way increase or enlarge the monopoly claimed by the remainder of the specification, the Courts have held want of novelty in such a claim to be no objection to the patent. As an illustration of this proposition we may instance the case of *True and the Variable Electric Lamp Syndicate v. Bryant Trading Syndicate* (25 R. P. C. 461). The patentee described and claimed a new form of incandescent electric lamp. It was essential to the particular nature of his invention that the lamp should be held firmly in the socket, and to ensure this he provided the wire projecting from the lamp to form a bayonet joint with the socket, with a small nut by means of which it was firmly clamped to the socket. There were only three claims, and the second was as follows: "A screwed nut *n* upon the end of the wire *f*, by which the said wire is held firm and prevented from coming out of the bayonet joint, substantially as described and illustrated." Mr. Justice Swinfen Eady said: "It was contended that the plaintiff's patent was invalid as claim 2 was an independent claim to the user of a screwed nut upon the end of a wire to fix the wire to the holder and to prevent it changing its position, and that the use of such a nut for such a purpose was one of the oldest devices in mechanics. In my opinion, the patentee . . . is merely describing a method of affixing his invention to the holder, as an advantageous method of using his invention, where special circumstances render it expedient, as, for instance, in any position where unusual vibration existed, so as to prevent the

transverse wire from accidentally coming out of the notches of the bayonet joint, and claim 2 is not an independent claim or a claim in gross, but merely a subsidiary claim within the meaning of the phrase as used by Lord Cairns in *The British Dynamite Co. v. Krebs* (13 R. P. C. 193), applied by Farwell, J., in *Parker v. Satchwell* (18 R. P. C. 307). Claim 2 is only claimed in connection with and as appendant to the improved device shown in claim 1."

Prior grant.

A patent will be invalidated if it can be shown that the invention has been the subject of a prior grant, although there may have been no prior publication. But only a valid prior grant would be sufficient for this purpose (y).

Industrial exhibitions and learned societies.

By sect. 45 of the Act of 1907 (as amended by the Act of 1919) it is enacted: "*The exhibition of an invention at an industrial or international exhibition, certified as such by the Board of Trade, or the publication of any description of the invention during the period of the holding of the exhibition, or the use of the invention for the purpose of the exhibition in the place where the exhibition is held, or the use of the invention during the period of the holding of the exhibition by any person elsewhere, without the privity and consent of the inventor, or the reading of a paper by an inventor before a learned society, or the publication of the paper in the society's transactions, shall not prejudice the right of the inventor to apply for and obtain a patent in respect of the invention or the validity of any patent granted on the application, provided that—*

(a) "*the exhibitor, before exhibiting the invention, or the person reading such paper or permitting such publication, gives the comptroller the prescribed notice of his intention to do so; and*

(b) "*the application for a patent is made before or within six months from the date of the opening of the exhibition, or the reading or publication of such paper.*

(2) "*His Majesty may by Order in Council apply this section to any exhibition mentioned in the Order in like manner as if it were an industrial or international exhibition certified as such by the*

(y) *The Mica Insulator Co. v. The Electrical Co.*, 15 R. P. C. 495; *Robertson v. Purdey*, 24 R. P. C. 273.

Board of Trade, and any such Order may provide that the exhibitor shall be relieved from the condition 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 may be stated in the Order."

Procedure for notifying the Comptroller is provided for by Rules 102 and 103 of the Patents Rules, 1920.

CHAPTER V.

UTILITY.

At common
law.

WE now come to the consideration of the question of utility, for not only must the invention be new, but it must be new and useful. The 6th section of the Statute of Monopolies does not refer to the necessity of utility in the invention, but saving, as it does, the common law prerogative of the Crown in respect of inventions, it refers us back to what had previously been held to be the necessary elements of an invention. In *Darcy v. Allein* (1602, Noy 182; see report in Gordon's "Monopolies by Patent") it was held that the invention must tend to the furtherance of trade, and be for the good of the realm, and that the monopoly was granted in consideration of the good that the inventor doth bring by his invention to the commonwealth, otherwise not. Consequently, an essential element of a valid grant is, that it should be for something which is for the good of the realm; that is, it must be useful (a).

In the case of *R. v. Arkwright* (1785, 1 W. P. C. 72) Buller, C.J., in leaving the matters to the jury, said: "There is another question, whether the stripe in it makes a material alteration, for if it appears, as some of the witnesses say, to do as well without the stripes, and to answer the same purpose if you suppose the stripes never to have been used before, that is not such an invention as will support the patent."

It will always be a question of fact, whether the invention is useful; that is, whether that which is new is a sufficient

(a) *Manton v. Parker*, Dav. P. C. 327; 1 W. P. C. 192, n.; *The Badische Anilin und Soda Fabrik v. Levinstein*, 4 R. P. C. at p. 462; *Elias v. Grovesend Tinsplate Co.*, 7 R. P. C. at p. 467; *Ward v. Hill*, 20 R. P. C. at p. 199.

meritorious advance or improvement upon what was already known by the public (*b*).

Each of the cases which have been decided upon the question of utility deal, and necessarily must deal, with an independent state of facts; and, consequently, no case can be said to be an authority for another case; but they go to show the general principle that "utility" means an improvement in the results attained, and not necessarily an extensive alteration; for instance, a man might discover a new needle for stitching boots, which would economise half-an-hour in the manufacture of each boot; such a needle would be the subject of a patent, although the whole improvement might consist of a bend.

The test of utility of an invention is that, when put in practice by a competent man, it should really do what it assumes to do, and be practically useful at the time when the patent is granted for the purposes indicated by the patentee. The test of utility.

In *Lanc-Fox v. The Kensington and Knightsbridge Electric Lighting Co.* (9 R. P. C. at p. 417) Lindley, L.J., said: "The utility of the alleged invention depends not on whether by following the directions in the complete specification all the results now necessary for commercial success can be obtained, but on whether by such directions the effects which the patentee professed to produce could be produced, and on the practical utility of those effects. . . . To judge of utility the directions in the specification must be followed, and if the result is that the object sought to be obtained can be attained, and is practically useful at the time when the patent is granted, the test of utility is satisfied. . . . An invention may be useful as indicating the direction in which further progress is to be expected, and yet that same invention may be useless for any other purpose; useless, that is, as an invention without further developments and improvements which have not occurred to the patentee. That is, in my opinion, the real truth with respect to the plaintiff's invention as now claimed by him. He made a distinct and important step in advance. The plaintiff

(*b*) *Hill v. Thompson*, 1 W. P. C. at p. 237; *Cornish v. Keene*, 1 W. P. C. at p. 506.

was the pioneer: he showed others the road to be followed, but he did not give the traveller the information necessary to enable him to travel on it. There were difficulties to be overcome which the patentee did not foresee, and against which he naturally made no provision. There is an enormous mass of conflicting evidence upon the possibility of obtaining practically useful results by following the directions contained in his specification. Much of the evidence adduced against the patentee merely goes to show that by following the directions in the specification you cannot produce such good results as are produced by the defendants. This obviously is wholly immaterial. But there is, besides, a great deal of evidence to show that an electrician of ordinary skill could not have produced any useful result in 1878 if he simply followed the directions contained in the specification with such variations only as an electrician of ordinary skill would have known how to make in 1878. So much more can be done now by a *Planté* battery than was suspected in 1878, that I have found the greatest difficulty in coming to a conclusion on this all important question. . . . I have studied the whole evidence with all the care I can bestow upon it, and have come to the conclusion that the plaintiff had not, in 1878, invented what he now says he had, namely, a practical method of keeping the electro-motive force in the mains constant at about 100 volts, by means of secondary batteries and dynamos used simultaneously as described."

Failure of
consideration.

In *Alsop's Patent* (24 R. P. C. at p. 752) Parker, J., said: "In considering the validity of a patent for a process it is therefore material to ascertain precisely what the patentee claims to be the result of the process for which the patent has been granted; the real consideration which he gives for the grant is the disclosure of a process which produces a result, and not the disclosure of a process which may or may not produce any result at all. If the patentee claims protection for a process for producing a result; and that result cannot be produced by the process in my opinion the consideration fails"; and in *Hatmaker v. Joseph Nathan & Co.* (36 R. P. C. at p. 237)

J. Birkenhead, L.C., after stating that the issuer of utility was one of fact, quotes with approval the passage from Mr.

Justice Parker's judgment above set forth and added: "In other words protection is purchased by the promise of results. It does not, and ought not to, survive the proved failure of the promise to produce the results" (c).

On the other hand, in *Edison v. Holland* (6 R. P. C. at p. 283) Lindley, L.J., said: "Edison's patent is said to be of no use, and the proof of this statement is said to be furnished by the fact that lamps are not made according to the patent, even by Edison himself. The utility of the patent 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" (d). Subsequent improvement immaterial.

In *The Badische Anilin und Soda Fabrik v. Levinstein* (4 R. P. C. at p. 462), in the House of Lords, Halsbury, L.C., said: "The element of commercial pecuniary success has, as it appears to me, no relation to the question of utility in patent law generally, though, of course, 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." Commercial success not necessary.

A very slight amount of utility will be sufficient to support a patent. Alderson, B., in *Morgan v. Seaward* (1 W. P. C. at p. 186), said: "I think if it was of different construction from any other steam engine, and of any use to the public, then that is sufficient." Again, Jessel, M.R., in *Otto v. Linford* (46 L. T. N. S. at p. 41), said: "And, as to this question of utility, very little will do" (e). Slight amount suffices.

(c) And see *Atkins and Apple-garth v. The Castner Kellner Alkali Co., Ltd.*, 18 R. P. C. at p. 295, and *Natural Colour Kinematograph Co., Ltd. v. Bioschemes, Ltd.* (Smith's Patent), 32 R. P. C. 256.

Light Co., 14 R. P. C. at p. 775; *Welsbach Incandescent Gas Light Co. v. New Incandescent Co.*, 17 R. P. C. at p. 252.

(e) See also Halsbury, L.C., in *The Badische Anilin und Soda Fabrik v. Levinstein*, 4 R. P. C. at p. 462; *Philpott v. Hanbury*, 2 R. P. C. at p. 37; *Ehrlich v. Ihlee*,

(d) And see *Otto v. Linford*, 46 L. T. N. S. at p. 41; and *Sunlight Incandescent Co. v. Incandescent Gas*

New choice
must be
useful.

If the patent is for an invention which purports to offer the public a new choice of means to accomplish what has previously been known, that choice must be a useful choice. In *Ward v. Hill* (20 R. P. C. at p. 199) Vaughan Williams, L.J., said: "I do not agree, that in every claim, if you secure the end which you profess by the letters patent to have in view, that is sufficient to constitute utility. He (counsel) says that if you present to the public a new choice, or present to the public an alternative mode of procuring a result in a manufacture which is already well known, that in itself is sufficient to constitute utility. I do not think so. I do not conceive that I am saying anything new, or anything different from the decided cases, when I say that in my judgment the alternative, or the choice which is presented to the public, must be a useful alternative or a useful choice" (*f*).

Dangerous
result.

In *Easterbrook v. The Great Western Ry. Co.* (2 R. P. C. 201) the patent was granted for machinery for actuating railway points. It was proved at the trial that the patented apparatus could be worked so as to give conflicting signals which might give rise to great danger. The patent was held invalid on this ground.

Utility alone
is not
sufficient.

Utility, however great it may be, cannot by itself support a grant of letters patent, and the application of an old contrivance to an analogous purpose, however useful the result may be, will not constitute a patentable invention (*g*).

Want of
utility in
part.

Utility, like novelty, is part of the consideration for a grant of letters patent, and if a material portion of the invention be useless, there is a failure of consideration, and the patent is altogether void (*h*). The effect of sect. 9 of the Act of 1919 must not be forgotten in this connection (*i*).

5 R. P. C. at p. 450; *Pirrie v. York Street Flax Spinning Co.*, 10 R. P. C. at p. 39.

(*f*) *Andsee Welsbach Incandescent Co. v. New Incandescent*, 17 R. P. C. at p. 252; 1900, 1 Ch. 850.

(*g*) Per Lord Watson in *Morgan v. Windover*, 7 R. P. C. at p. 136; and see Chap. III., on "Subject-matter."

(*h*) *Simpson v. Holliday*, L. R. 1 H. L. 315, 322; *Turner v. Winter*, 1 W. P. C. at p. 82; *Morgan v. Seaward*, 2 M. & W. at p. 561; *The United Horsenail Co. v. Stewart*, 2 R. P. C. at p. 132; *United Horseshoe and Nail Co. v. Swedish Horsenail Co.*, 6 R. P. C. at p. 8.

(*i*) See p. 74, ante.

A distinction must be drawn between cases in which the patentee claims to produce certain results, and can be said to base his application for a patent upon the representation that such results are obtained and cases in which he merely states certain advantageous applications of his new result. In the former class failure to produce the result is a failure of consideration, and of this class *Hatmaker v. Nathan & Co.* (cited above) is an example. As to the latter class in *Alsop's Patent* (24 R. P. C. at p. 753) Parker, J., said: "There may be cases in which the result which the patentee claims to have produced can in fact be produced, but the patentee has gone on to detail the useful purposes to which such result can be applied, and that in fact the result produced cannot be applied to one or more of such purposes. In such a case I do not think the patent is necessarily void, provided there are purposes for which the result is useful. If it be avoided it can only be because it contains a misrepresentation so material that it can be said the Crown has been deceived."

Tindal, C.J., in *Haworth v. Hardeastle* (1 Bing. N. C. at p. 190), said: "If the jury think it useful in the general, because some cases occur in which it does not answer, we think it would be much too strong a conclusion to hold that patent void."

In that case part of the patentee's claim was for the application of the machinery described for drying calicoes, the said machinery being adapted for taking up and removing the said calicoes after being dried. At the trial it appeared that the machine failed in taking up certain cloths stiffened with clay (j).

Where an invention is as a whole useful, a very small amount of utility will be sufficient to support a second and subsidiary claim (k), and it does not show that the patent is bad because one of the methods claimed is preferred to the others (l).

Commercial success is strong evidence of utility (m), though,

(j) And see *Lewis v. Marling*, 10 B. & C. at p. 25. 106.

(k) *Ehrlich v. Ihlee*, 5 R. P. C. at p. 455.

(m) *Automatic Airtight Cover, Ltd. v. Stockford*, 19 R. P. C. at p. 460.

(l) *Miller v. Scarle*, 10 R. P. C.

as has been pointed out above, its absence is no proof of want of utility (n).

Fact of infringement is evidence.

Kay, J., in *Lucas v. Miller* (2 R. P. C. at p. 160), said: "Better evidence of the utility of an invention cannot possibly be had than the fact that the defendant has attempted to infringe it" (o).

(n) See ante, p. 81.

v. *Scarle*, 10 R. P. C. at p. 111.

(o) See also Bowen, L.J., in *Miller*

CHAPTER VI.

THE SPECIFICATION.

ONE of the conditions which support the consideration for a valid patent is that the patentee must publish his invention, that is to say, he must file a "specification" containing a description of the subject-matter of his patent. He must give such an account of the way of working it, and of what he particularly claims, as to enable an ordinary skilled person to carry out the invention without further assistance or discovery. To publish
the invention.

By sect. 1, sub-sect. 3, of the Act of 1907, "*the 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 at least of the applicants, claims to be the true and first inventor, and for which he desires to obtain a patent, and must be accompanied by either a provisional or complete specification.*"

The functions of a provisional and those of a complete specification are defined by sect. 2, which has made no alteration in the law upon this point.

(1) "*A provisional specification must describe the nature of the invention.*"

(2) "*A complete specification must particularly describe and ascertain the nature of the invention and the manner in which the same is to be performed.*"

If the applicant elects to file a provisional specification he must within nine months file a complete specification, and a patent is not granted until the condition of filing a complete specification has been fulfilled.

In the early days of patent law the king granted a patent for an invention, naming it in the patent, and defining it merely by that name, and it was open to the patentee to allege that anything which fell within the name was covered by the History of
specification.

The title.

patent. As manufactures sprang up this method was found to lack preciseness of limitation, and accordingly in the reign of Anne a condition was inserted in all grants of letters patent, and that condition is the foundation of modern patent law. It was a proviso obliging the inventor "by an instrument under his hand and seal particularly to describe and ascertain the nature of the said invention, and in what manner the same is to be performed and to cause the same to be enrolled within six calendar months." The Crown continued, however, to grant patents on a mere title, the obligation to file a description being a mere subsequent condition. The reason for granting the patent on the title and giving the inventor a further nine months was to ensure that he should not be forestalled before he could complete the invention and bring it to a practical form. It was, however, necessary that the specification should not be inconsistent with or wider than the title which still continued to form the basis of the grant, and numerous cases are recorded in which the patent was held to be invalid on the ground of variance between the title and the specification. For instance, a man who had invented a new street lamp, and described his invention in the title as being "a method or methods of more completely lighting cities, towns and villages," was held to have vitiated his patent by going too far in his title. His claim should have been for a new or improved street lamp (a).

These cases seem to have been decided upon the ground that an incorrect or too extensive title is evidence of fraud upon the Crown. For instance, in *Brunton v. Hawkes* (4 B. & Ald. 558) Best, J., said: "That the patent was taken out for more than the patentee was entitled to, that, in my opinion, avoids the patent *in toto*, for the king is deceived."

The provisional specification ;

It was found that application for letters patent, being made merely upon the title of an invention, caused a great deal of inconvenience and uncertainty; therefore, by the Patent Law Amendment Act, 1852, the provisional specification was created. Whereas prior to the passing of that Act, an applicant

(a) *Cochrane v. Smethurst*, Dav. 1785, 1 W. P. C. 76; *Bloxam v. P. C.* 354; 2 Coop. Ch. Cas. 57; 1 *Elsee*, 1827, 6 B. & C. 169; *Croll v. Stark*. R. 205; and see *R. v. Else, Edge*, 9 C. B. 479.

for letters patent, when he made his application, had merely deposited the title of his invention, by sect. 6 a provisional specification was required, which was intended to give more definite information as to the nature of the invention for which protection was sought than could possibly be given in a mere title. The provisional specification was thereafter to perform the function that was formerly that of the title, and since the Act of 1852 there is no reported case of a patent held to be invalid on the ground of variance between the title and the specification. It is true that the specification must commence with a title (*b*), but the function of the modern title is altogether different from that which it formerly fulfilled. It is more for the purpose of identifying the invention for reference and indexing, and its accuracy is in these times a matter for the examiners at the Patent Office.

function of
modern title
quite
different.

The filing of a provisional specification confers upon the applicant "Provisional Protection" for his invention against the consequences of publication (*c*). The patent when granted dates back to the time when the application was lodged (*d*), but no rights against the public are conferred until the complete specification is accepted and published (*e*), after which a right of action accrues against infringers. No proceedings may be taken, however, until the patent is sealed (*f*). In these respects the law is the same as under the Act of 1883.

Provisional
protection.

It is somewhat difficult to define clearly the distinction between that which is absolutely necessary in the provisional specification and that which is absolutely necessary in a complete specification. In *Newall v. Elliott* (4 C. B. N. S. at p. 293) Byles, J., said: "The office of the provisional specification 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." In *Stoner v. Todd* (L. R. 4 Ch. D. 58) Jessel, M.R., said: "I must consider first the nature of a provisional specification, and the effect of a provisional specification on a final specification of

(*b*) Act of 1907, sect. 2, sub-sect. 4.

(*e*) Sect. 13.

(*c*) Sect. 4.

(*f*) Sect. 10.

(*d*) Sect. 13.

the same invention. A provisional specification was never intended to be more than a mode of protecting an inventor until the time of filing a final specification; it was 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." In *Woodward v. Sansum* (4 R. P. C. at p. 174; 56 L. T. 347) the Court of Appeal held that all a patentee need do in his provisional specification is to describe his invention. He need not go on therein to describe any method of carrying out the invention, but, whether he do so or not, if a different or further mode of carrying out the invention is described in his complete specification that will not invalidate the patent so long as such new method of carrying out is fairly within the invention as described in the provisional specification (g).

Purpose of
provisional
specification.
Discon-
formity.

It is evident, therefore, that the object of the legislature in creating a provisional specification, and founding upon it a period of provisional protection, was to enable the inventor in that interval to improve and perfect his invention, and to ascertain clearly what was new and what was old in that which he proposed to patent. That being so, it is obvious that it could not have been the intention of the legislature that, when framing a complete specification, the inventor should be bound to follow implicitly every detail which he had given in his provisional specification, or that he should be prevented from adding to or subtracting from his invention; for, in that case, the object would be defeated.

Lord Chelmsford, in *Penn v. Bibby* (L. R. 2 Ch. at p. 133), said: "The relation which the provisional specification bears to the complete specification is much the same as that which before the Patent Law Amendment Act a title bore to the specification . . . the only objection then which is open upon the complete specification, is whether it is sufficient in itself, and whether it agrees with the provisional specification. Now, by 'agreement' is not meant a perfect correspondence, but merely that there shall be nothing in the complete specification at variance with the provisional. . . . Nor is it at all

(g) And see *Moseley v. Victoria Rubber Co.*, 4 R. P. C. 241.

necessary that the specification should extend to everything comprehended in the provisional specification. Perhaps a better illustration of this proposition could not be given than that which was offered in the course of the argument. If the patentee were to introduce into his complete specification everything which was warranted by the terms of the provisional specification, and afterwards found that a part of that which he had claimed would invalidate his patent for want of novelty, or for any other reason, he might afterwards cure the objection by a disclaimer. Now if he would be allowed to disclaim in such a case, which is a matter of indulgence, he must have a right to waive his claim to any portion of the grant which the allowance of the provisional specification had entitled him to demand. It is clear, therefore, that unless a complete specification in this case claims something *different* from the provisional specification, the objection to the patent under consideration cannot prevail."

A. L. Smith, L.J., in *The Cassel Gold Extracting Co., Ltd. v. The Cyanide Gold Recovery Syndicate* (12 R. P. C. at p. 257), said: "In a provisional specification no claim is ever made by the patentee, he has not to state therein what he claims, or how he carries out his invention; but he must state its nature in such a way that the law officers may see what it is, and so that the identity of its subject-matter, with that of the complete specification which is to come thereafter, may be ascertained. In the complete specification the patentee has to do much more. Not only has he to state therein what his invention is, but he must particularly describe how his invention is to be carried out and performed, and what he claims" (*h*).

It does not follow if the provisional specification describes some method of carrying the invention into effect, and the complete specification does not describe this method, but sets forth a better method, the nature of the invention remaining

(*h*) And see *Bailey v. Robertson*, L. R. 3 A. C. at p. 1075; *Woodward v. Sansum*, 4 R. P. C. at p. 178, and *The Pneumatic Tyre Co. v. The East London Rubber Co.*, 14 R. P. C. at p. 98.

the same, that the method described in the provisional specification is thereby disclaimed (i).

The plea of disconformity when successful often worked great hardship, for the excess of invention in the complete specification over that in the provisional was sometimes the most meritorious part and quite novel in itself. Of course, if the excess matter had not been novel at the date when the application was made and the provisional specification filed, the patent failed for want of novelty, and the patentee was not entitled to any special sympathy. In order, however, to relieve the patentee under the circumstances of the first-mentioned kind, the law was considerably modified by sect. 42 of the Act of 1907. The section is as follows:—

Statutory relief by sect. 42.

“A patent shall not be held to be invalid on the ground that the complete specification claims a further or different invention to that contained in the provisional, if the invention therein claimed, so far as it is not contained in the provisional, was novel at the date when the complete specification was put in, and the applicant was the first and true inventor thereof.”

The excess matter must not only have been invented by the inventor, but it must have been novel at the date when the complete specification was put in, a considerably later date than that of the application. If the excess matter was not novel at the date of the provisional specification (*i.e.*, the application), then of course the patent will be invalid for want of novelty. If it be established that the excess matter was novel at the date of the application and provisional specification, but had been published before the complete specification had been filed, even by the patentee himself, the patent will be invalid, not on the ground of want of novelty, for in discussing novelty it is the date of the application that has to be considered, but on the old ground of disconformity.

The Welch Case.

The Welch Patent is an instructive example by which to illustrate the law on disconformity and also the effect of sect. 42. The patent was attacked on the ground of disconformity, and was held valid. If the arguments of the defendants had been successful the patent would have been

(i) *Sadow v. Szalay*, 23 R. P. O. 6.

held invalid under the old law, but had the section been law at that time the validity would have been saved, on the ground that the excess matter was novel at the date when the complete specification was put in. The judgment of Romer, J., in *The Pneumatic Tyre Co. v. The East London Rubber Co.* (14 R. P. C. at p. 98) covers all the arguments. In his provisional specification the inventor described an improved method of holding solid rubber tyres on to concave wheel rims by means of circular hoops of wire passed through circumferential holes in the edges of the tyre. Towards the end of the specification he said: "The above described improvements are also applicable to cycle and other wheels in present use, or made in the ordinary way, in which case they may be fitted over the existing rubbers without necessarily making any alteration. Or I may substitute in place of the ordinary rubber a lighter or cheaper material such as cork"; he also indicated that his invention might be applied to "cushion tyres." No mention of pneumatic tyres was made, although they were known at that date. In the complete specification he showed the invention as applied to pneumatic tyres, and this turned out to be by far the most valuable part of the invention, the effects produced being quite new, and making the pneumatic tyre, for the first time, a merchantable article. In the provisional specification the chief objects of the invention were stated to be "easy running, reduction of vibration, and the security of the rubbers to the metal rims or felloes." The learned judge said (p. 99): "The patentee was not bound, in his provisional specification, to detail the advantages of his invention. . . . No doubt, in the first part of his invention, when he is dealing with his tyres when used as the only tyres on a cycle, and not as covers to existing rubbers, he does effect all the three chief objects mentioned above. . . . He certainly obtains one of those objects when his tyre, with its fastening, is applied as a cover to pneumatic rubbers, namely, the securing of the tyre over the existing pneumatic rubber; and if he obtains that and other advantages by the extension, I fail to see why the extension, being useful, is not within the specification. He was not bound, when he

came, in his provisional specification, to the extension, to point out its particular advantages; and, indeed, it would have been imprudent, if not impossible, satisfactorily for him to do so, seeing that different advantages might probably be obtained from covering different kinds of existing rubbers."

Drawings
may be
required with
provisional
specification.

Sub-sects. 3, 4 and 5 of sect. 2 are as follows:—

(3) "*In the case of any provisional or complete specification where the comptroller deems it desirable he may require that suitable drawings shall be supplied with the specification, or at any time before the acceptance of the same, and such drawings shall be deemed to form part of the said specification (j).*"

(4) "*A specification, whether provisional or complete, must commence with the title, and in the case of a complete specification must end with a distinct statement of the invention claimed (k).*"

(5) "*Where the invention in respect of which an application is made is a chemical invention, such typical samples and specimens as may be prescribed shall, if in any particular case the comptroller considers it desirable so to require, be furnished before the acceptance of the complete specification.*"

THE COMPLETE SPECIFICATION.

The complete
specification.

One of the essential considerations for the grant is that the patentee shall completely disclose the nature of his invention and the manner of carrying it into effect. This he does by filing a "complete specification" either at the time of the application or within nine (l) months thereof.

The information which must be conveyed by the complete specification is therefore considerably more than that required in a provisional, which need only describe the nature of the invention.

A complete and full disclosure is necessary, as the patent is in the nature of a bargain with the public, and the same

(j) The relation between the drawings and the letterpress will be discussed later.

(k) As to title, see p. 86 *et seq.*, supra. As to claims, see below.

(l) Under the Act of 1883 the period was nine months; this was shortened to six months by the Act of 1907; and extended again to nine months by the Act of 1919.

principle of good faith must be applied as that which regulates other contracts.

The following are the requirements which a complete specification must fulfil, and which we shall proceed to treat in detail:—

1. It must be set forth in clear language, free from ambiguity, (*a*) the nature of the invention and (*b*) the way it is to be carried into effect, so that persons to whom it is addressed would have no difficulty in carrying out the invention from the description.
2. It must be framed in good faith and show clearly the best way of carrying out the invention known to the patentee at the time—including any information he may have acquired since filing the provisional specification.

1.—(*a*) INTELLIGIBILITY AND DEFINITION OF AMBIT.

The inventor must point out clearly (*a*) the nature of his invention and (*b*) the manner of carrying it into effect.

In *Phillpott v. Hanbury* (2 R. P. C. at p. 38) Grove, J., said: "By the letters patent, a patentee is required as a condition of his patent, to particularly ascertain and describe the nature of his invention and the means of performing the same. Now those are two quite different things. The object of requiring the patentee to state what his invention is, as has been said (for I am by no means the first who has said it), to let the public know what is the prohibited ground, and what they are not to do—what the patentee has got his grant for, which gives him a monopoly for fourteen years . . . a patentee for the purpose of telling the public what his patent prevents their using without his licence for fourteen years, must give the nature of his invention in reasonably accurate language. . . . Then the second proviso is that he shall also particularly ascertain the means—I repeat the words, though the words are not repeated but implied—of performing the same, that is, of carrying the invention into practical effect. That is a totally different object. The object of that is to prevent what was at one time done and practised, I believe to a large extent, namely patentees getting

**Intelligibility
and sufficiency dis-
tinguished.**

patents for an invention and keeping to themselves the 'trick of the trade,' if I may use the expression, that is to say, the means of performing it. . . . Letters patent therefore say 'you shall not have this monopoly unless you do two things—first of all, disclose the nature of the invention and tell the public the prohibited ground; and secondly, give them the means of carrying it into effect, so that at the expiration of your patent anybody (at all events, anybody with the ordinary knowledge of the particular trade to which it relates) may put your invention into practice.' ”

Defining
ambit of
monopoly.

Now as to definition of the nature of the invention in the sense of the ambit of the monopoly, it is the duty of the patentee to mark out his territory clearly and without any ambiguity, and of late years the Court have enforced this obligation very strictly. In *Natural Colour Kinematograph Co., Ltd. v. Bioschemes, Ltd. (Smith's Patent)* (32 R. P. C. at p. 266), Lord Loreburn, L.C., said: "This patent is bad for ambiguity in the specification. There seems to be some danger of the well-known rule of law against ambiguity being in practice invaded. Some of those who draft specifications and claims are apt to treat this industry as a trial of skill, in which the object is to make the claim very wide upon one interpretation of it, in order to prevent as many people as possible from competing with the patentee's business, and then to rely upon carefully prepared sentences in the specification which, it is hoped, will be just enough to limit the claim within safe dimensions if it is attacked in Court. This leads to litigation as to the construction of specifications, which could generally be avoided, if at the outset a sincere attempt were made to state exactly what was meant in plain language. The fear of a costly lawsuit is apt to deter any but wealthy competitors from contesting a patent. This is all wrong. It is an abuse which a Court can prevent, whether a charge of ambiguity is or is not raised on the pleadings, because it affects the public by practically enlarging the monopoly, and does so by a kind of pressure which is very objectionable. It is the duty of a patentee to state clearly and distinctly, either in direct words or by clear and distinct reference, the nature and limits of

what he claims. If he uses language which, when fairly read, is avoidably obscure or ambiguous, the patent is invalid, whether the defect be due to design, or to carelessness, or to want of skill. Where the invention is difficult to explain, due allowance will of course be made for any resulting difficulty in the language. But nothing can excuse the use of ambiguous language when simple language can easily be employed, and the only safe way is for the patentee to do his best to be clear and intelligible. It is necessary to emphasize this warning." Lords Parker and Parmoor used words to the same effect. In *The British Ore Concentration Syndicate, Ltd. v. Minerals Separation, Ltd.* (27 R. P. C. at p. 47), Lord Halsbury said: "The statute requires it (the specification) to be a distinct statement of what is the invention. In construing a specification one has to remember that it is a document not only assuring a monopoly to the patentee, which but for the statute would be contrary to the common law, but so prohibiting any one, other than the patentee, doing what he would be free to do, but for the right which is granted, subject to the condition, among other things, that the patentee states distinctly what his invention is. If he designedly makes it ambiguous, in my judgment the patent would undoubtedly be bad on that ground; but even if negligently and unskilfully he fails to make distinct what his invention is, I am of opinion that the condition is not fulfilled, and the consequence would be that the patent would be bad" (m).

By sect. 2, sub-sect. 4, of the Act of 1907, re-enacting sect. 5, sub-sect. 5, of the Act of 1883, it is provided that "*a specification, whether provisional or complete, must commence with the title, and in the case of a complete specification must end with a distinct statement of the invention claimed.*" This is, perhaps, emphasising, in a more distinct manner than had been provided before the passing of the Act of 1883, that the inventor must make a distinct and unambiguous claim.

It was decided in the House of Lords that the enactment in sect. 5 of the Act of 1883, that a complete specification must

(m) See also Loreburn, L.C., in *Linotype and Machinery, Ltd. v. Hopkins*, 27 R. P. C. at p. 112.

end with a distinct statement of the invention claimed, was directory only, and when letters patent have been granted, they will not be invalid merely because it has not been complied with (*n*).

History of the claim.

In the case of *The British United Shoe Machinery Co. v. Fussell* (25 R. P. C. at p. 650) Fletcher Moulton, L.J., dealt with the history of distinct claims as part of specifications. After mentioning the Act of Anne (see p. 86, ante), which required the patentee to state in a specification: (1) The nature of the invention, and (2) the method of performing the same, the learned Lord Justice proceeded: "The first was necessary to define the monopoly and the second was necessary to secure that the public was not defrauded by the patentee. . . . These two things—the delimitation of the invention and full practical directions how to use it—are in their nature almost antagonistic. As it is the duty of the inventor to give the fullest practical information to the public, he is bound to put in, if for instance the invention is a process, quantities, and times which are the best he knows. But it would be very cruel to hold him to the invention when carried out only with those best quantities and times, because a person could then take his invention in substance if he did not take it in quite the best way, and the value of the grant would be practically nothing. Hence inventors, in their own protection, took to introducing into their specifications language intended to distinguish between that which was there for the practical information of the public, and that which was there for delimitation of the invention. Correct delimitation was of the greatest possible importance to the inventor, because if his patent covered something which was old the patent was wholly bad. At the same time there was the danger of confining himself to a mere outline which gave delimitation, but did not tell the public the best way within those limits of performing his invention. The one duty required him to state his invention in its most general form, and the other duty required him to state it in its best, and therefore in a very special form.

(*n*) *Vickers v. Siddell*, 7 R. P. C. at p. 303; L. R. 15 App. Cas. 496, 500, 505.

Out of that has arisen the practice, which originally was perfectly optional, of having a separate part of the specification primarily designed for delimitation. That is what we call the claim."

The Court, therefore, must be taken to distinguish between describing too much and claiming too much. In the course of a well-drawn specification it is frequently necessary to describe something which is old, and, provided that it is made clear that the old parts do not constitute a portion of the invention, the description of the old parts in the specification will not invalidate the patent. Provided moreover that the ambit of the monopoly be distinctly defined there is no need to discriminate between the prior state of the art and the new features in fact introduced by the patentee. No need to
"distinguish
new from
old."

Fletcher Moulton, L.J., pointed this out also in his judgment: "In the Act of 1883, for the first time, it was made a statutable duty to insert claims to define the invention, and that has been continued up to the present time; but the language of the statute follows that of the old proviso and leaves no doubt that the duty is only to define the invention for which the monopoly is claimed. The justice and sufficiency of that requirement are obvious. Specifications are not for the purpose of providing material for subsequent historians as to the genesis of ideas; they are for the purpose of informing the public as to what is the monopoly . . . A patentee often works solitarily. He has very little idea of what others are doing, and I think I may say that in the enormous majority of instances, if not universally, he has no complete knowledge of what has been done by others in connection with the matter on which he is working. The inventive acts by which he arrives at the invention for which he finally obtains protection may be inventive acts which have started far behind the level of public knowledge at the time, and much of his work truly inventive so far as he is concerned has been to re-invent that which others, without his knowledge, have invented. The consequence is that the inventive act of the inventor can have no relevance or effect; it is a thing which depends on his knowledge of what others had done. Then are we to say that he is to state what

would have been the inventive act, supposing him to know the whole knowledge of the world. . . . Of course, if his ignorance has led him to claim something which is not novel he has to take the penalty. He has chosen at his own risk to ask for and take a monopoly as against the public, and the consequence is, that if, with the best of faith, he has asked for too much, he must suffer for it. But to say that he must also ascertain, under the penalty of his patent being bad, everything that preceded his invention, every approach from every side that persons have made to it, and must correctly indicate the little step which he has made in addition to these, most of which he never knew, would be to require something of him, which would be perfectly idle so far as regards utility to the public, and grossly unjust so far as the patentee is concerned. . . . For these reasons I am satisfied that there is no duty to distinguish old from new in the invention actually claimed. If the invention actually claimed is novel that is sufficient."

**Combination
claims.**

So where a patent is for a combination of old or new parts, or for an improved arrangement of old mechanism, provided it be clear that a monopoly is claimed for the new combination only, the specification need not discriminate between the new and old parts of such combination or improved apparatus unless it be desired to claim any of those subordinate parts *per se*, since it is the new combination alone that constitutes the novelty and merit of the invention; but it is necessary for the patentee to ascertain and define particularly what his monopoly covers, or what are the exact parts of his new combination, so that any person of ordinary knowledge of the subject may be able at once, on reading the specification, to know that the invention claimed consists in the combination specified.

As Lord Justice Fletcher Moulton observed (p. 651): "If I were to sum up my criticism of the point I should say that a man must distinguish what is old from what is new *by* his claim; but he has not got to distinguish what is old from what is new *in* his claim. If the combination which he has claimed, and for which he asks a monopoly, is novel, that is sufficient. There is no obligation to go further and to state why it is novel, or what in it is novel."

Where the meaning of a phrase is dubious, or there is a doubtful use of a commonly used word, the construction, as is the case with all documents, is for the Court alone (o). In the construction of technical words, however, there are involved the questions of intelligibility and sufficiency, and such construction is one of fact to be decided by the judge (or by the jury if there be one) after hearing the evidence of expert in the trade, but except as to the meaning of scientific terms, or as to the working of mechanical appliances, or as to what will be the result of working mechanical appliances, or for the purpose of ascertaining the state of public knowledge at the date of the patent, expert evidence is inadmissible in determining the construction of a specification, and for this reason the ambit of the monopoly claim, *i.e.*, the "nature of the invention," is a matter not of evidence but of construction. The distinction was clearly pointed out by Lord Cairns in *The British Dynamite Co. v. Krebs* (13 R. P. C. at p. 192): "In determining whether the complete specification is sufficient, the first thing is to ascertain what the invention is. This is a question of construction, and the construction of the specification is for the Court, to be determined like the construction of any other written instrument, the Court placing itself in the position of some person acquainted with the surrounding circumstances as to the state of art and manufacture at the time, and making itself acquainted with the technical meaning in art or manufactures which any particular word or words may have. When the nature of the invention is thus ascertained by the Court, as a matter of construction, the Court has then to inquire whether the manner in which the same is to be performed is sufficiently described in the specification to the comprehension of any workman of ordinary skill in the particular art or manufacture; and this the Court can best do by the evidence of workmen of that description, and by the evidence of what workmen of that description have actually

Construction
is for the
Court.

Ambit of
claim is for
Court alone.

(o) *Neilson v. Harford*, 1 W. P. C. at p. 370; *Seed v. Higgins*, 30 L. J. Q. B. at p. 317; 8 H. L. C. 565; *Hills v. Evans*, 31 L. J. Ch. at p. 460; *Brooks v. Steele and Currie*, 14 R. P. C. at p. 73; and see Index, cap. "Evidence."

done under the patent." And Lindley, L.J., in *Brooks v. Steele and Currie* (14 R. P. C. at p. 73), said: "The judge may, and indeed generally must, be assisted by expert evidence to explain technical terms, to show the practical working of machinery described or drawn, and to point out what is old and what is new in the specification. Expert evidence is also admissible, and is often required to show the particulars in which an alleged invention has been used by an alleged infringer, and the real importance of whatever differences there may be between the plaintiff's invention and whatever is done by the defendant. But, after all, the nature of the invention for which a patent is granted must be ascertained from the specification, and has to be determined by the judge and not by a jury, nor by any expert or other witness. This is familiar law, although apparently often disregarded when witnesses are being examined" (p).

In the case of *Hills v. London Gaslight Co.* (27 L. J. Ex. 60) it was held, that where the meaning of a document depends upon its terms and not on matters of fact *dehors* the document, the question will be for the judge, even although the terms are technical or scientific; and where an ambiguity was raised by evidence *dehors* the document, which was plain upon the face of it, the ambiguity being as to a term which imported one thing in a scientific sense, and another in a commercial sense, Baron Bramwell was of opinion that the meaning became a matter of fact.

Benevolent construction.

The leaning of the Courts is generally in favour of the patentee, and specifications will not be construed astutely so as to overthrow a patent. Sir George Jessel, in the case of *Hinks v. The Safety Lighting Co.* (L. R. 4 Ch. D. at p. 612), said: "I am anxious, 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 being overturned on mere technical objections or on mere cavillings with the language of their specifications, so as to deprive the inventor of the benefit

(p) And see *Gadd and another v. The Mayor of Manchester*, 9 R. P. C. at p. 530.

of his invention ; that is sometimes called a 'benevolent' mode of construction ; perhaps that is not the best term to use, but it may be described as construing the language of the specification fairly, with a judicial anxiety to support a really useful invention, if it can be supported by a reasonable construction of a patent ; beyond that the benevolent mode of construction does not go."

The word "benevolent" has been commented on in several cases :—

In *Needham v. Johnson* (1 R. P. C. at p. 58) Lindley, L.J., said: "I do not like the expression 'benevolent interpretation.' I do not believe in it. The question is whether a given construction is the true construction ; but, of course, 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."

Lord Esher, M.R., in *Nobel's Explosives Co. v. Anderson* (11 R. P. C. at p. 530), said: "It is quite true that the Court has in this specification, as in every other, to put upon it the most favourable construction which it honestly can in favour of the patentee. What does that involve ? If the Court does not take care to confine the patentee's patent within its legitimate limits the Court will hold the patent to be such as would render it void. Therefore they must take care not to stretch his claim, otherwise they may by their construction make the patent void. They must not diminish the claim, limit it too tightly, or they may make his patent worthless. Then they have to come to really what is the honest business conclusion of the meaning of what is written down. That is what they have to do."

In the same case Lord Esher said (at p. 523) : "I am clearly of opinion that, whether the patent be a pioneer patent, or a master patent, or a patent of the first invention, or whether it be a valuable patent or a patent for the smallest thing, or whether it be a patent for an improvement, or whatever the patent may be, the canons of construction of the patent are precisely the same. What is more, I am further of opinion



that the canons of construction of the patent are the same canons of construction that are to be applied to every written instrument which has to be construed by the Court" (q).

The patentee is to be presumed not to claim things which he must have known perfectly well were not new (r), but if upon a fair construction of the specification it is clear that he has claimed such old contrivance the patent will be void upon that ground (s).

Construction
as of date of
publication.

A specification is to be construed with reference to the state of knowledge at the time it is published (t). Lord Esher, in *Nobel's Explosives Co. v. Anderson* (11 R. P. C. at p. 523), said: "Now what is the very first canon of construction of all written business documents? Why, that the Court ought to construe them as if it had to construe them the day after they were published."

In the construction of a specification, as in the construction of any other document, the Court will read the whole and endeavour to place an interpretation upon it which will be consistent with each part, including the drawings, and will give an effective meaning to every part of it, if it can. Lord Esher, M.R., in *Parkinson v. Simon* (11 R. P. C. at p. 502), said: "Now when you find a patent with several claims in it, you must, if you can, so construe those claims as to give an effective meaning to each of them. If there are

(q) See also *Plimpton v. Spiller*, L. R. 6 C. D. at p. 422; *Otto v. Linford*, 46 L. T. N. S. at p. 39; *Cropper v. Smith*, 1 R. P. C. at p. 88; *Automatic Weighing Machine Co. v. Knight*, 6 R. P. C. at p. 307; *Edison Bell Phonograph Co. v. Smith*, 11 R. P. C. at p. 400; *Benno Jaffé Fabrik v. Richardson*, 11 R. P. C. at p. 271; *Parkinson v. Simon*, 12 R. P. C. at p. 411; *Tolson v. Speight*, 13 R. P. C. at p. 721.

(r) *Haworth v. Hardcastle*, 1 W. P. C. at p. 484; *Cropper v. Smith*, 1 R. P. C. at p. 85; *Lyon v. Goddard*, 10 R. P. C. at p. 133;

Tubes, Ltd. v. Perfecta Seamless Tube Co., 20 R. P. C. at p. 97.

(s) This statement of the law was approved by Swinfen Eady, J., in *The Cooper Patent Anchor Rail Joint Co. v. The London County Council*, 23 R. P. C. at p. 295. See also *Adie v. Clark*, L. R. 2 A. C. at p. 437.

(t) And see *The Badische Anilin und Soda Fabrik v. Levinstein*, L. R. 12 App. Cas. 710; 4 R. P. C. at p. 463; *Lane-Fox v. Kensington and Knightsbridge Electric Lighting Co.*, 9 R. P. C. at p. 417; *The Presto Gear Case Co. v. Orme, Evans & Co.*, 18 R. P. C. at p. 23.

several claims in the patent which are identical with each other, then some of them have no effect at all. It follows from the ordinary rule of construction that you must construe the different claims so as to make them effective, if possible, to be different from each other in some respects, or else they are not effective" (u). And further, the Court will even look at the provisional specification for the purpose of ascertaining the real object of the invention disclosed in the complete; "for the object of the complete is to carry out in detail that which is more generally expressed in the provisional specification" (v). But if the provisional specification contains a description of the manner in which the invention may be carried into effect, it does not follow that if the complete specification describes a better method, the earlier method is thereby disclaimed (w).

Provisional
may be
looked at.

A question has been raised as to whether portions of a specification deleted by amendment might be referred to for construing the remainder (x). This question is now set at rest by sect. 21, sub-sect. 7, of the Act of 1907, as amended by the Act of 1919, which enacts that ". . . the amendment . . . shall in all Courts and for all purposes be deemed to form part of the specification. Provided that the Court shall be entitled in construing a specification as amended to refer to the specification as accepted or published."

Construction
of amended
specification.

The claim will be construed with reference to the entire patent; and although at first sight there may be some appearance of obscurity in it, if it can be made clear by the consideration of the whole specification, the patent will not be thereby avoided (y).

Construction
of the claims.

(u) And see *Edison v. Woodhouse*, 4 R. P. C. at p. 107; *Tubes, Ltd. v. Perfecta Seamless Tube Co., Ltd.*, 20 R. P. C. at p. 96; *Hattersley v. Hodgson*, 23 R. P. C. at p. 203.

Motor Accessories, Ltd., 28 R. P. C. 532.

(v) Per Lord Esher, M.R., in *Parkinson v. Simon*, 1894, 11 R. P. C. at p. 503.

(y) *Arnold v. Bradbury*, L. R. 6 Ch. at p. 712; *Plimpton v. Spiller*, L. R. 6 Ch. D. at p. 427; *Edison v. Woodhouse*, 4 R. P. C. at p. 107; *Leadbeater v. Kitchin*, 7 R. P. C. at p. 244; *Edison v. Smith*, 1894, 11

(w) *Sandow v. Szalay*, 1906, 23 R. P. C. at p. 14.

R. P. C. at p. 395; *Electric Construction Co. v. Imperial Tramways Co.*, 16 R. P. C. at p. 638; *British*

(x) See *Lake and Elliott v. Rotor*

Order of
consideration.

In the case of *Arnold v. Bradbury* (L. R. 6 Ch. at p. 712) Lord Hatherley, in the course of his judgment, says: "I do not think that the proper way of dealing with this question is to look first at the claims, and then see what the full description of the invention is; but rather first to read the description of the invention, in order that your mind may be prepared for what it is the inventor is about to claim."

Each subordinate part of an invention must be claimed specifically in order to be independently protected, for everything that is not claimed is considered to be disclaimed, and should a man describe ten inventions in his specification and claim only one of them, he thereby presents to the public the remaining nine (*z*).

"Substan-
tially as
described."

The claims at the end of a specification frequently end with the words "as herein described," or "substantially as herein described." The effect of these words on the ambit of the claim both for novelty and infringement depends entirely on the nature of the object to be attained by the device described, which is to be ascertained by reading the specification as a whole. If the merit of the invention be the attainment of a new result the Court does not attach much importance to the words "as affecting any narrow limitation" (*a*). If, on the other hand, the invention have the smaller merit of being the discovery of a new road to an old result, the words "as herein described" are a useful abbreviation for emphasising this fact in the claim (*b*). But beyond having this cautioning effect, they are mere verbiage, as the same result may be obtained by carefully construing the specification.

United Shoe Machinery Co. v. Hugh Cloughton, Ltd., 23 R. P. C. at p. 334.

(*z*) *Hinks v. Safety Lighting Co.*, L. R. 4 Ch. D. at p. 612.

(*a*) See, e.g., *United Telephone Co. v. Bassano*, 3 R. P. C. at p. 315; *Proctor v. Bennis*, 4 R. P. C. 333; *Cussel Gold Extracting Co. v. Cyanide Gold Recovery Syndicate*, 12 R. P. C. at p. 257; *Parkinson v.*

Simon, 12 R. P. C. at p. 408; *Welsbach Incandescent Gas Light Co. v. New Incandescent Co.*, 17 R. P. C. at p. 250, and see Chap. VII.

(*b*) See, e.g., *Curtis v. Platt*, L. R. 3 C. D. 136 n.; *Easterbrook v. Great Western Rail. Co.*, 2 R. P. C. at p. 208; *Brooks v. Lamplugh*, 15 R. P. C. at p. 49; *Ackroyd and Best, Ltd. v. Thomas*, 21 R. P. C. at pp. 749 and 750.

In *Westinghouse v. Lancashire and Yorkshire Ry. Co.* (1 R. P. C. at p. 241) Grove, J., said: "I have said before, practically 'substantially as herein described' comes to nothing. It is supposed, and probably it does have some effect when counsel are addressing the jury to say, 'we claim it substantially as herein described'; but they are idle words, because, if the infringer does what is 'substantially herein described and claimed' he just as much infringes the patent whether the word 'substantially' is used or not. So that they are mere catch expressions and no real use at all, but some patent agents are very fond of putting them in, . . . but they do not alter the law or carry it a step further because the patentee, when he claims his invention, claims it in connection with the drawings, and when he describes the nature of his invention, any person who substantially adopts that invention as claimed by him, infringes his patent, and not a bit the more or less, because the patentee puts in the word 'substantially.' It is simple verbiage" (c).

The fact that one of the claims is practically a repetition of another will not vitiate a patent. In the *Wenham Gas Co. v. The Champion Gas Lamp Co.* (9 R. P. C. at p. 55) Lindley, L.J., said: "I think the true construction of the fourth claim is pointing out the importance of the perforated tube in claim 3—a repetition in fact of claim 3—I do not think it is anything more. If so, it does not vitiate the patent. It may be open to the criticism that it is redundant; but if it is nothing more than pointing out what is a valuable operation, and what has been claimed in clause 3, it does not thereby vitiate the patent." But an effective meaning must if possible be given to each claim. In *Parkinson v. Simon* (11 R. P. C. at p. 502) Lord Esher, M.R., said: "When you find a patent with several claims in it, you must, if you can, so construe those claims as to give an effective meaning to each of them. If there are several claims which are identical with each other, then some of them have no effect at all. It follows from the ordinary rules of construction that you must construe the

(c) See the same judge's remarks p. 33, and *Goddard v. Lyon*, 11 in *Young v. Rosenthal*, 1 R. P. C. at R. P. C. at p. 362.

Repetition of claims no objection.

different claims so as to make them effective if possible, to be different from each other in some respects, or else they are not effective."

Appendant claims.

Where one of the claims in a specification, although strictly, if taken by itself, would be for something old, is purely appendant and subordinate to the main invention, it has been held that a patent is not void on that account (*d*).

Previous constructions binding.

When a specification has once received a judicial construction the Court, in a subsequent action in respect of the same invention, will hold itself bound on that point by such previous decision (*e*), but fresh evidence may be adduced at the second action for the purpose of showing that that which before was not regarded as an anticipation is so in fact (*f*).

(b) SUFFICIENCY.

The Addressee.

We may now proceed to deal with the requirement that a specification must be sufficient to enable a person skilled in the art to carry the invention into effect. The patentee is entitled to assume that the person to whom the specification is addressed will possess that degree of skill and knowledge which would ordinarily be expected of his class.

In *Heath v. Unwin* (1 W. P. C. at p. 245) Baron Alderson said: "Every specification is to be read as if by persons acquainted with the general facts of the mechanical or chemical sciences involved in such invention; thus, if a particular mechanical process is specified, and there are for some parts of it, as specified, other well-known mechanical equivalents, the specification in those parts is in truth the specification of the well-known equivalent also, to those to whose general knowledge we refer: viz., mechanics and readers of specifications; and so it is with chemical equivalents also, in a specification

(*d*) *E.g., True and The Variable Electric Lamp Syndicate v. Bryant Trading Syndicate*, 25 R. P. C. 461.

(*e*) *Edison v. Holland*, 6 R. P. C. at p. 276; *The Automatic Weighing Machine Co. v. Combined Weighing Machine Co.*, 6 R. P. C. at p. 370,

and the various actions on the Welch patent.

(*f*) *Shaw v. Day*, 11 R. P. C. at p. 189; see also *Edison v. Holland*, 6 R. P. C. at p. 277; *Flour Oxidizing Co. v. Carr*, 25 R. P. C. at p. 448.

which is to be read by chemists. But it may be that there are equivalents, mechanical and chemical, existing, but previously unknown to ordinary skilful mechanics and chemists. These are not included in the specification, but must be expressly stated there."

Therefore the language to be used and the completeness of the description will depend entirely on the person to whom it is addressed. It is not sufficient to say that it must appeal to the ordinary workman practising that particular trade; since, for instance, a workman, or even a foreman, in a chemical works might not possess the technical skill and knowledge to understand a new chemical process which the manager would have no difficulty in directing them to put in practice. This must be understood when those judgments in which the words "competent workmen" are used come to be considered.

As an instance, the case of *The Incandescent Light Co. v. The De Mare Incandescent Gas Light Co.* (13 R. P. C. at p. 327) may be mentioned, where Mr. Justice Wills said: "The subject-matter of the specification is such that no one but a person possessing a very considerable amount of chemical knowledge could, at the date of the specification, be considered a competent workman."

The complexity of modern industries involving chemical and engineering questions in the solution of a single problem may necessitate more than one "addressee" for a single specification. In *Osram Lamp Works, Ltd. v. Pope's Electric Lamp Co.* (34 R. P. C. at p. 391) Lord Parker said: "A specification may be considered as addressed, at any rate primarily, to the persons who would in normal course, have to act on the directions given for the performance. These persons may be assumed to possess not only a reasonable amount of common sense, but also a competent knowledge of the art or arts which have to be called into play in carrying the patentee's directions into effect. I say 'art or arts' because in carrying out the directions given by the patentee it may well be necessary to call in aid more than one art. Some of the directions contained in a specification may have to be carried out by skilled mechanics, others by competent chemists. In such a case, the mechanic and chemist

must be assumed to co-operate for the purpose in view, each making good any deficiency in the other's technical equipment. The specification cannot be considered insufficient merely because the mechanic without the aid of the chemist, or the chemist without the aid of the mechanic, would be unable to comprehend the meaning of, or to carry into effect the directions given by the patentee. For example, in the present case a skilled mechanic might be uncertain as to the temperature of carbonisation; but this would be unimportant if the industrial chemist would, having regard to the object to be attained, have no doubt on the point. Again, the chemist might be ignorant of some necessary detail in the mechanical means usually employed in the formation of filaments; but this would be unimportant if the mechanic, acquainted with the way in which filaments were usually formed, had the necessary knowledge."

An interesting illustration of the principle that the addressee is the person engaged in the particular industry to which the invention relates is to be found in *The "Z" Electric Lamp Co. v. Marples Leach & Co. (g)*. The specification prescribed the use of a substance known as "phospham" in the manufacture of incandescent electric lamps for a particular purpose. The defendants showed that "phospham" in the strictest chemical sense would not operate in the manner desired. The plaintiffs on the other hand showed that the substance as obtained from chemical manufacturers was not quite pure and that it would work satisfactorily. It was held that the addressee was the lamp manufacturer, and that he would in the ordinary course of business procure his "phospham" from the chemical manufacturer. The patent was held valid.

Intelligibility and sufficiency questions of fact.

Degree of sufficiency required.

Whether it be sufficient is a question of fact in each particular case to be decided on evidence (*h*).

Generally speaking, then, an inventor is entitled to assume that the persons to whom the specification is addressed possess the ordinary skill of their trade, and he is not required to give directions of a more minute nature than such a person

(g) 27 R. P. C. 305, 737.

p. 237; *British Dynamite Co. v.*

(h) *R. v. Arkwright*, 1 W. P. C. 64; *Hill v. Thompson*, 1 W. P. C. at

Krebs, 13 R. P. C. at p. 192.

might fairly be expected to need (*i*). If, for example, in the process of the invention it is necessary to use some old or well-known apparatus, it is not necessary in the specification to describe the apparatus, save in such terms as it is generally known by, in the particular business to which it belongs. But should the success of the invention depend particularly on the manner in which an old instrument though well known is directed to be used, the directions must lay stress on this point, if it would not be obvious to the skilled tradesman.

In *The Badische Anilin v. La Société Chimique* (15 R. P. C. 359), the specification directed that two substances were to be heated together "in an iron autoclave." Now it was proved that in similar operations the trade frequently made use of autoclaves which were not made of iron, and in many such operations enamelled autoclaves had advantages. The success of the plaintiff's process entirely depended upon the use of an iron vessel, without which the reaction would not take place. The specification was declared insufficient.

The specification must be sufficient to enable the invention to be carried into effect without a series of experiments.

Jessel, M.R., in *Plimpton v. Malcolmson* (L. R. 3 Ch. D. at p. 576), said: "You must not give people mechanical problems and call them specifications."

But this broad statement requires some modification. The inventor cannot be expected to relieve the "competent workman" from all obligation to take trouble in carrying into effect the description in the specification. Moreover, it may safely be said that in modern engineering practice no one would think of treating the drawings of a machine in a specification as working drawings. Even with the best of such drawings a certain amount of designing and calculation has to be carried out before a machine can be built, and the degree of knowledge

(*i*) *Boulton v. Bull*, 2 H. Bl. at p. 478; *Morgan v. Seaward*, 1 W. P. C. at p. 174; *In re Gaulard and Gibbs' Patent*, 6 R. P. C. 224; *Edison v. Holland*, 6 R. P. C. at pp. 280, 282; *Miller v. Clyde Bridge Steel Co.*, 8 R. P. C. at p. 201; *Hopkinson v. St. James's and Pall Mall Lighting Co.*, 10 R. P. C. at p. 61; *Kane v. Boyle*, 18 R. P. C. at p. 336.

requisite to perform such operations must be presumed in the person to whom the specification is addressed. In *Edison and Swan Electric Light Co. v. Holland* (6 R. P. C. at p. 277) Cotton, L.J., said: "The objection taken as a whole, was that the specification did not sufficiently show how the invention is to be carried into effect. It is necessary that this should be done so as to be intelligible, and to enable the thing to be made without further invention by . . . 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" (*j*).

Effect of errors.

An error in a specification which may be said, in a sense, to be a technical error, will not vitiate a specification, although it be an error in description or drawing, provided it be such an error that an ordinary skilled workman would at once observe and be in a position to correct; provided it is not such an error as would require experiments to show that it was an error (*k*).

And it frequently occurs that the inventor states an erroneous theory as to the operation of the machine or process, the subject of the invention. This will not invalidate the patent unless it amounts to a misleading statement (*l*).

In *Wegmann v. Corcoran* (L. R. 13 Ch. D. 65) it was held that the specification of a patent was bad if one of the materials to be used was described by a generic term comprising a variety of species, the majority of which would be

(*j*) And see *Morgan v. Seaward*, 1 W. P. C. at p. 176; *Otto v. Linford*, 46 L. T. N. S. at p. 40; *Osram Lamp Works, Ltd. v. Pope's Electric Lamp Co.*, quoted at p. 107, supra; *Watson, Laidlaw & Co. v. Pott & Ors.*, 27 R. P. C. at p. 558 and 28 R. P. C. at p. 580.

(*k*) *Simpson v. Holliday*, 13 W. R. 578; L. R. 1 H. L. 321; *Otto v. Linford*, 46 L. T. N. S. at p. 40;

Miller v. Scarle, 10 R. P. C. at p. 111; *British United Shoe Machinery Co. v. A. Fussell and Sons, Ltd.*, 25 R. P. C. at p. 385.

(*l*) As in *Monnet v. Beck*, 14 R. P. C. at p. 847, and see "*Z*" *Electric Lamp Co. v. Marples, Leach & Co.*, 27 R. P. C. 305, 737; *Knight v. Argylls, Ltd.*, 29 R. P. C. 593; 30 R. P. C. 321.

unsuitable, thus rendering experiment necessary to ascertain which were suitable.

And in *Simpson v. Holliday* (L. R. 1 H. L. 315) the patentee described specifically two alternative methods of producing his result. And his claim included both methods. One of them would not work and the patent was held invalid. It is important, therefore, before holding that a patent is invalid for this or for any other reason that the Court should first construe the specification correctly. If that description of the process which is claimed as the subject of the monopoly is insufficient then the patent is invalid. In *Vidal Dyes Syndicate v. Levinstein* (29 R. P. C. at p. 269) Moulton, L.J., said: "It is this co-existence of the duty to tell the public the best way of carrying out the invention, which is at the time known to the inventor, and the duty of marking out clearly the limits of the monopoly which the inventor claims, that leads so frequently to the presence of permissible alternatives in the specification, and the Courts rightly consider that an inventor is not to be limited by description of steps which he recommends, provided, on the fair construction of the specification, he has not represented them as necessary, and that his claim fairly construed, includes cases where these useful alternatives are not used, as well as those where they are. . . ." (p. 270). In the case of dinitrophenols the specification clearly says that you must reduce by sulphuret of sodium before you expose the body to the reaction of sulphur which causes the formation of the dye. But in the case of dinitronaphthols, the specification only says that you may advantageously do so, and it clearly reserves to the patentee, as one method of carrying out his invention, that you should perform the dye-forming reaction without previously treating the dinitronaphthols with sulphuret of sodium. Both these processes, therefore, are included within the claim, and it is admitted that the latter will not work. It follows, therefore, that on this ground the patent must be held to be invalid" (m).

But if the inventor describes, under a generic term, an ingredient to be used, and illustrates the term by examples, the mere fact that some things which might be included

(m) And see *Lewis v. Marling*, 1 W. P. C. at p. 495.

under the generic term, and are not described, would not be suitable, will not invalidate the patent. In *Leonhardt v. Kallé* (12 R. P. C. at p. 116) Romer, J., said: "Now, with reference to that, what has the patentee done, and what really could he do more? He has pointed out numerous oxidisable substances, and admittedly those oxidisable substances he mentioned are as good, if not better, and are more easily dealt with than the other oxidisable substances which are not specifically mentioned. Was it reasonable to suppose that the patentee ought to set himself down as a sort of dictionary to specify every known oxidisable substance, and to point out which of those could not give very useful results, or which might be disregarded?" (n).

The question of the sufficiency of a specification is one which must be dealt with on each particular case as it arises; a single word added to a specification may make that which was insufficient sufficient, and that which would be a sufficient description of one invention would be found to be an insufficient description of another, consequently there can be no absolutely fixed rules of construction in dealing with specifications.

SECOND REQUIREMENT, GOOD FAITH AND DISCLOSURE OF BEST METHOD.

If a patentee suppresses anything, or if he misleads, or if he does not communicate all he knows, his patent is bad.

In *Crompton v. Ibbotson* (1 W. P. C. 83) the specification stated: "My invention consists in conducting paper by means of a cloth against a heated cylinder, which cloth may be of *any suitable* material, but I *prefer* it to be made of linen warp and woollen weft." It appeared that the plaintiff had tried several things but was unable to discover anything that would answer the purpose with the exception of the material which he said "he preferred." Lord Tenterden held that the specification was misleading, and therefore bad.

In *Wegmann v. Corcoran* (L. R. 13 Ch. D. 65) the invention patented, on a communication from abroad, consisted

(n) And see *Watson, Laidlaw & Co. v. Potts and Ors.*, 27 R. P. C. at p. 558, and 28 R. P. C. at p. 580.

of a special construction of rollers for milling corn. The specification prescribed the use of iron rollers covered with very hard china, turned smooth by the aid of diamond tools. It was proved that china of the requisite hardness had not been made in England for half a century, and that such china could not be made unless the manufacturer tried elaborate experiments. The plaintiff himself obtained his rollers from Italy, where the process of their manufacture was kept secret, but the specification did not mention this fact, and without it the description in the specification was useless. The specification was held to be insufficient and misleading. Fry, J., said: "Though the grantee of a patent for an invention communi-
In case of
communicated inven-
tion.
cated to him by a foreign resident abroad is only bound to tell the public what he himself knows, yet if the original inventor has not told him enough to enable him so to describe the invention as that it could be constructed by the aid only of the specification, the patent will be invalid." *Sturtz v. De la Rue* (1 W. P. C. 83) was a very similar case.

It will be seen that *Wegmann v. Corcoran* is distinguishable from the case of *Plimpton v. Malcolmson* (L. R. 3 Ch. D. 582). There the question was whether the patentee, having disclosed a useful invention, was bound to disclose something more, some fact more useful still than the description actually given, which he himself did not know, but which was within the knowledge of the person communicating from abroad; in that case it was properly held that he was not so bound, but it is obvious that he was bound to describe an invention in itself useful, and that he was bound to tell all that he himself knew, and to give a sufficient description to work the invention.

Upon the same ground of mala fides it has been held, in a large number of cases, that if the patentee in his specification gives details which are not necessary to the invention, which of themselves do not constitute an invention, and which are merely put in for the purpose of misleading the public as to either what is the nature of the invention or how it is to be carried into effect, then the patent will be void.

But Bayley, J., in *Lewis v. Marling* (1 W. P. C. at p. 496)

said: "His patent is for an instrument where something of that kind was always thought material, and I am of opinion that the subsequent discovery that the plush was unnecessary is no objection to the patent. If the party knew that it was unnecessary the patent would be bad, on the ground that this was a deception, but if he thought it was proper, and only by a subsequent discovery finds out that it is not necessary, I think that forms no ground of objection."

Therefore the requirement is not as much for perfection of detail as for good faith on the part of the patentee. This is illustrated by the case of *The British Dynamite Co. v. Krebs* (13 R. P. C. at p. 195). The inventor, Nobel, described a new explosive (dynamite) which he said, in his specification, was to be made by causing nitro-glycerine, *per se* a very dangerous and erratic liquid, to be absorbed by a porous unexplosive substance. He gave a list of such substances which were shown to be more or less useful. The resulting mass was safe and could be stored. He found subsequently that there was a certain, well-known silicious earth called "kieselguhr" which possessed the requisites of porosity and power of absorption to a very high degree, and the dynamite actually manufactured was, in consequence, always produced by the aid of this material. Lord Hatherley, restoring the judgment of Fry, J., said: "If it had been proved that the inventor, Nobel, knew the best material, which turned out to be a material called 'kieselguhr,' a silicious earth; if he had known of the existence of 'kieselguhr' at the time, and that it would take up 75 per cent. of the nitro-glycerine, whereas some other materials specified by the patentee took up only 25 or 50 per cent., it would have been an objection to his patent to say that he, being in possession of the best mode of producing the most valuable dynamite, had not informed the public of that method."

In *Tetley v. Easton* (Mac. P. C. at p. 76) Pollock, C.B., said: "A man has no right to patent a principle and then give to the public the humblest instrument that can be made from his principle, and reserve to himself all the better part of it." And in *Heath v. Unwin* (2 W. P. C. at p. 243) Coleridge, J.,

said: "If the inventor of an alleged discovery, knowing two equivalent agents for effecting the end, could, by the disclosure of one, preclude the public from the benefit of 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" (o).

In *The Badische Anilin und Soda Fabrik v. Levinstein* (4 R. P. C. at p. 464; L. R. 12 A. C. 716) the patentee in his specification described four processes whereby he could produce sulpho acids of oxyazo-naphthaline applicable to dyeing and printing, varying in colour from brown to red. All these processes he claimed, although only one of the shades was proved to have any practical value, and it was argued that the patent was bad on the ground that no description was given of the relative advantages of each particular shade of colour; it was held by the House of Lords, reversing the decision of the Court of Appeal, that to require such discrimination was to insist upon what was really impracticable; for, in the words of Lord Halsbury, L.C., "Upon the principle contended for, each shade must not only be shown, but its excellence or popularity must be distinguished separately by the patentee. This, as it appears to me, reduces the obligation supposed to press upon the patentee to an absurdity."

No need to state advantages.

But where the attainment of a particular advantage constitutes the whole essence of the invention it is necessary to state this advantage in order to properly delimit the invention. In *Clay v. Allcock* (23 R. P. C. 745) the invention consisted of a paternoster sea-fishing line, in which booms carrying hooks were pivoted at right angles to the trace, and were capable of swinging downwards so as to give a "straight pull" when a bite occurred; so far the invention was not novel. The specification stated, however, that the inward end of the boom should be constructed "preferably" of a diamond shape, and the drawings illustrated a construction of this form. The

save where such are whole essence of invention.

(o) And see *Wood v. Zimmer*, 1 W. P. C. at p. 117; *Morgan v. W. P. C. 82, n.*; *Crossley v. Beverley* *Seaward*, 1 W. P. C. at p. 174.

claim was for booms constructed "as described." It appeared, although it was not so stated in the specification, that a particular advantage attended the use of the diamond shape which rendered it very useful and constituted the whole novelty of the invention. The Court of Appeal held that the invention, as broadly claimed, was invalid for want of novelty. Fletcher Moulton, L.J. (at p. 750), said: "I quite agree that in the preferable form of his invention, which the patentee has shown in his drawings, he would have that effect or advantage, but I can find nothing which indicates that he intended that to mark out the limits of his territory. . . . Counsel for the plaintiff urged the well-known principle in patent law that a man need not state the effect or the advantage of his invention, if he describes his invention so as to produce it. But that is not true where he has to rely on the presence or absence of such effect or advantage as a part of the necessary delimitation. The fact that it is a mere consequence cannot be pleaded by him as an excuse for not putting it in, if the leaving it out leaves his invention inadequately defined" (p).

Drawings.

By sect. 2, sub-sect. 3, of the Act of 1907, it is enacted: "*In the case of any provisional or complete specification where the comptroller deems it desirable, he may require that suitable drawings shall be supplied with the specification, or at any time before the acceptance of the same, and such drawings shall be deemed to form part of the said specification.*"

Before the Act of 1883 drawings were quite optional on the part of the patentee; but then, as now, if drawings had not been filed, and the invention had been too complicated to be understood without them, the patent would be invalid on account of insufficiency, and not because drawings were not filed. Drawings have always been held to be merely part of the specification and to be read with the letterpress, and whether the invention will be limited by the drawings will depend on the nature of the invention.

Discrepancies in drawings.

It is sometimes asked, "What is to be done if there is a discrepancy between the printed matter and the drawings?"

(p) And see as an illustration *Hargreaves & Co.*, 37 R. P. C. at *Contraflo Condenser Co. v. Hick*, p. 103.

And this may be answered by the question, "Does the discrepancy produce ambiguity sufficient to mislead?" If it be clear to persons skilled in the trade what is meant, then the patent is not ambiguous, and it is immaterial from which part of the specification they have drawn their information. If there is ambiguity, the patent is invalid. It is submitted that this proposition covers the whole point.

CHAPTER VII.

INFRINGEMENT OF LETTERS PATENT.

Royal Com-
mand in
Letters
Patent.

THE infringement of a patent is the doing that which the patent prohibits from being done. The words of the Royal Command are as follows: "We do by these presents for us, our heirs and successors, strictly command all our subjects whatsoever within our United Kingdom of Great Britain and Ireland and the Isle of Man, that they do not at any time during the continuance of the said term of sixteen years, either directly or indirectly make use of or put in practice the said invention, or any part of the same, nor in anywise imitate the same, nor make or cause to be made any addition thereto or subtraction therefrom, whereby to pretend themselves the inventors thereof, without the consent, license or agreement of the said patentee in writing under his hand and seal, on pain of incurring such penalties as may be justly inflicted on such offenders for their contempt of this our Royal command, and of being answerable to the patentee according to law for his damages thereby occasioned."

No duty to
warn in-
fringers.

There is no duty cast upon a patentee to inform persons that what they are doing amounts to an infringement of his patent, and he is not estopped by omitting to give such information, although he knew of the infringement, from subsequently bringing his action (a). If, however, the patentee were falsely to represent to a manufacturer that the wares manufactured by him were not an infringement of the patent, and thereby induce him to spend money on further manufactures or otherwise to place himself at a disadvantage, the conduct of the patentee would amount to acquiescence, and he could not succeed in an action for infringement (b).

(a) *Proctor v. Bennis*, L. R. 36 Ch. D. 740. (b) *Ibid.* at p. 760.

Infringement is a mixed question of law and fact; firstly, the specification must be construed and its ambit determined as a matter of law, and then it is a matter of fact whether (a) the defendant has committed the acts complained of and (b) whether such acts do or do not fall within the construction already put on the specification and its claims.

Infringement
a mixed
question of
law and fact.

If, however, the defendant can prove that the act complained of is merely what was done before the date of the patent without substantial or patentable variation he has a good defence and need not trouble himself with any argument as to the construction of the plaintiff's specification. In *Gillette Safety Razor Co. v. Anglo-American Trading Co.* (30 R. P. C. at p. 480), Lord Moulton said: "I am of opinion that in this case the defendant's right to succeed can be established without an examination of the terms of the specification of the plaintiff's letters patent. I am aware that such a mode of deciding a patent case is unusual, but from the point of view of the public, it is important that this method of viewing their rights should not be overlooked. In practical life it is often the only safeguard to the manufacturer. It is impossible for an ordinary member of the public to keep watch on all the numerous patents which are taken out and to ascertain the validity and scope of their claims. But he is entitled to feel secure if he knows that that which he is doing differs from that which has been done of old only in non-patentable variations, such as the substitution of mechanical equivalents or changes of material, shape, or size. The defence that 'the alleged infringement was not novel at the date of the plaintiff's letters patent,' is a good defence in law, and it would sometimes obviate the great length and expense of patent cases if the defendant could and would put forth his case in this form, and thus spare himself the trouble of demonstrating on which horn of the well-known dilemma the plaintiff had impaled himself, invalidity or non-infringement." No case has yet arisen, however, in which the defendant has been bold enough to avail himself on the pleadings of Lord Moulton's suggestion (c).

(c) See also *Proctor v. Bennis*, 4 Practice in Infringement Action; R. P. C. at p. 351; chapter on heading, "Particulars of Objections."

No infringement of invalid patent.

If the patent be invalid there can be no infringement in the sense that a patent which has no legal existence cannot be infringed.

Ignorance no excuse.

It is equally an infringement whether the defendant acted in ignorance of the plaintiff's patent or not (*d*). In *Heath v. Unwin* (14 L. J. Ex. at p. 156; 2 W. P. C. at p. 227), Parke, B., delivering the judgment of the Court, said: "There was therefore no intention to imitate the patentee's invention, and we do not think the defendant can be considered to be guilty of any indirect infringement if he did not intend to imitate at all." Thus judgment certainly give an erroneous impression of the law, and subsequently, when *Heath v. Unwin* (25 L. J. C. P. at p. 19; 5 H. L. at p. 537) came before the House of Lords, the opinion of the judges being taken, Parke, B., acknowledged the error into which the Court had fallen.

Nor intention.

In *Stead v. Anderson* (2 W. P. C. at p. 156), Wilde, C.J., tersely puts it: "We think it clear that the action is maintainable in respect of what the defendant does, not what he intends."

So it is immaterial whether the defendant was aware that the thing was patented or not, since in law every person in the realm is taken to have notice of a patent in the same way that he is taken to be aware of the law (*e*).

And the converse is also sound—if a person intending to infringe a patent does not in fact do so, he will not be taken to have infringed (*f*).

Save as to question of remedy.

The bona fides of the infringer does, however, affect the rights of the patentee with respect to the remedy which he may obtain (*g*).

Proof of an intention to infringe, apart from actual infringement, may, however, justify an injunction to restrain such infringement (*h*).

The question as to what will or what will not amount to infringement, like many other points which arise in the law of

(*d*) *Proctor v. Bennis*, 36 C. D. at p. 760.

(*e*) And see *Wright v. Hitchcock*, L. R. 5 Ex. 37; *Young v. Rosenthal*, 1 R. P. C. at p. 39.

(*f*) *Newall v. Elliott*, 10 Jur. N. S. at p. 958; 13 W. R. at p. 18.

(*g*) See sect. 33 of the Act of 1907.

(*h*) See Index, Cap. "Injunction."

letters patent, must depend upon the facts of each particular case, and the decision in one case cannot possibly bind the decision in another; consequently the consideration of decided cases is only useful as showing the principles which underlie the judgments in those cases.

In *Nobel's Explosives Co. v. Anderson* (11 R. P. C. at p. 127), Romer, J., said: "Several cases were cited to show the canons of construction on which the Courts have acted in different cases relating to infringements. But it is not necessary for me to deal with these cases in detail, for I desire emphatically to state that, in my view, one principle only governs all the cases, whether they relate to so-called 'master' patents, or patents dealing with discoveries in matter of principle, or to any other kind of patent; and that principle is this: In order to make out infringement, it must be established, to the satisfaction of the Court, that the alleged infringer, dealing with what he is doing as a matter of substance, is taking the invention claimed by the patent; not the invention which the patentee might have claimed if he had been well advised or bolder, but that which he has in fact and substance claimed on a fair construction of the specification."

One principle governs all cases.

But the consideration of the question of infringement is much simplified if one remembers that inventions may be divided roughly into two classes in respect to subject-matter (see p. 37, supra). Firstly there is that kind of invention which consists in the discovery of a method of application of a new principle—here what has been invented is in effect the new principle, and, generally speaking, the Court will regard jealously any other method embodying that principle, for the patentee was not bound to describe every method by which his invention could be carried into effect. Secondly there is that kind of invention which consists in some particular new method of applying a well-known principle, and in this case the use of other methods is not contemplated by the patentee, and such will not fall within the ambit of his claim. It is important to remember that, as was pointed out by Romer, J., in the passage quoted above, the claim made by the patentee is the point to be considered, not the actual merit of the invention.

But two classes of inventions.

A patentee is at liberty to make a wide or a narrow claim as he chooses. If his claim be too wide he runs the risk of invalidity, if too narrow he allows persons to escape who have taken advantage of his real invention but avoided the net of his monopoly, for if it be clear on construing his claim that he has limited his monopoly to the precise method shown of carrying out his invention no amount of merit and originality in the fundamental principle involved will extend his claim to other methods. As Lord Shaw said in *Ridd Milling Machine Co. v. Simplex Milling Machine Co.* (33 R. P. C. at p. 317): "It might be possible in very many cases of a claim for apparatus—if the argument presented were sound—to evolve a claim for a principle from a description given of the results achieved, and to maintain accordingly that it was the principle of the invention in that sense, which was the real subject of the claim. This is in their Lordships' opinion, a method of construction of patent claims which is accompanied with serious danger . . . if any claim for a principle is made it must undoubtedly appear in the claim as that claim is stated, and must not be left to an inference resting on a general review of the specification, or a general secret among the language employed therein for the meritorious element of principle or idea" (i).

Bowen, L.J., in *Jackson v. Wolstenhulmes* (1 R. P. C. at p. 108), said: "It must be remembered that claims are for the security of patentees, to prevent it being said that the patentee has claimed more than can be really supported as his invention."

An interesting case of an inventor limiting himself by his claim to something narrower than he had actually invented, and thereby failing to catch an infringer, is to be found in *The Incandescent Gas Light Co. v. The Sunlight Incandescent Gas Light Co.* (13 R. P. C. 333). The real nature of the discovery was that a skeleton of earthy oxides could be produced, which, when suspended in a Bunsen flame, formed an illuminant. The claim, however, was limited to the manufacture of such a skeleton of certain specified materials, and in a certain specified

(i) And see *Ackroyd and Best, Ltd. v. Thomas*, 21 R. P. C. at p. 750; *Dudgeon v. Thompson*, L. R. 3 A. C. at p. 44; and *Presto Gear Case Co. v. Orme Evans & Co.*, 18 R. P. C. at p. 23.

manner. The defendant skilfully avoided the use of the patented invention by making use of the principle, but producing the skeleton of other substances and manufacturing in another manner.

In *Jupe v. Pratt* (1 W. P. C. at p. 146), in the course of the argument Alderson, B., said: "You cannot take out a patent for a principle. You may take out a patent for a principle coupled with the mode of carrying the principle into effect, provided you have not only discovered the principle but invented some mode of carrying it into effect. But then you must start with having invented some mode of carrying the principle into effect: If you have done that, then you are entitled to protect yourself from all the other modes of carrying the principle into effect, that being treated by the jury as a piracy of your original invention." This statement of the law was approved by the House of Lords in *Chamberlain and Hookham, Ltd. v. Bradford Corporation* (20 R. P. C. at p. 684), and by Parker, J., in *The British United Shoe Machinery Co., Ltd. v. Simon Collier, Ltd.* (26 R. P. C. at p. 49), but when the words ". . . patent for a principle *coupled with* the mode . . ." are closely examined it is easy to see that they are liable to misinterpretation. Alderson, B., did *not* say that in such a case the specification could end with two distinct claims, one for the principle irrespective of its application, and the other for the method of application—his meaning is made clear by his observations in *Neilson v. Harford* (1 W. P. C. at p. 355). The dictum in *Jupe v. Pratt* and the subsequent observations in *Neilson v. Harford* were dealt with by the Court of Appeal in *The Automatic Weighing Machine Co. v. Knight* (6 R. P. C. 297), in which Cotton, L.J., said (at p. 204), referring to the dictum in *Jupe v. Pratt*: "Those were the expressions used by Baron Alderson during the discussion, probably to meet something that was said by counsel, and did not express his full opinion. You can prevent anyone from using the same method of carrying that principle into effect, and you can prevent anyone from using only the same thing with a colourable difference. That is what we had to consider in *Proctor v. Bennis* (4 R. P. C. 333). Where there is a principle first applied in a machine

Baron Alderson's dictum.

capable of carrying it into effect, the Court looks more narrowly at those who carry out the same principle, and say they do it by a different mode, and looks to see whether, in effect, although the mode is not exactly the same, it is only a colourable difference, a mechanical equivalent for a substantial part of the patentee's invention being looked upon as a mere colourable difference, and, therefore, he being entitled to an injunction against that mode of carrying out his principle, which is only the same in substance as that which he patented, though there are colourable differences" (*j*).

It may be stated generally that the Court will in every case inquire in what the essence of the invention as claimed consists, and will hold the defendant to have infringed if he has taken the pith and marrow of the invention as claimed, and when the claim is merely for an improved mode of attaining an old object the monopoly is for that particular improved method, and only by making use of that particular method will a man be held to have infringed; but when the claim is for a method of attaining a new result, the novelty of the result itself is part of the merit of the invention and of the consideration given by the patentee in return for the grant; and, consequently, a man will be held to have infringed if he should have arrived at the same result by means of a process substantially the same as, or only colourably different from, that disclosed in the specification, of the original invention. In other words, there are two classes of invention, but only one principle governing the law of infringement.

**Curtis v.
Platt.**

In *Curtis v. Platt* (L. R. 3 C. D. 136, n.), Wood, V.-C., said: "Where the thing is wholly novel, and one which has never been achieved before, the machine itself which is invented necessarily contains a great amount of novelty in all its parts, and one looks very narrowly and very jealously upon any other machine for effecting the same object, to see whether or not

(*j*) And see the observations of Lord Esher, M.R., and Kay, L.J., in *Nobel's Explosives Co. v. Anderson*, 11 R. P. C. at pp. 525 and 527; Halsbury, L.C., in *Ashworth v. English*

Card Clothing Co., 20 R. P. C. at p. 797; and Lord Haldane, L.C., in *British Vacuum Cleaner Co. v. Robertshaw*, 32 R. P. C. 435

they are merely colourable contrivances for evading that which has been before done. When the object itself is one which is not new, but the means only are new, one is not inclined to say that a person who invents a particular means of doing something that has been known to all the world long before, has a right to extend very largely the interpretation of those means which he has adopted for carrying it into effect. Because, otherwise, that would be to say that the whole world is to be precluded from achieving some desirable and well-known object which everybody has had in view for years. In such a case it may be said that the means taken are simply mechanical equivalents for the means previously adopted for arriving at the same object" (k).

In *Proctor v. Bennis* (4 R. P. C. 333) the patentee claimed the combination in the mechanism of four integers designated by the letters used to indicate them in the drawings when applied "as and for the purpose herein fully described and illustrated." The purpose was shown to be a novel purpose, and the defendant had used mechanical equivalents for each of the integers and had combined them for the same purpose. In the course of his decision Cotton, L.J. (at p. 355), comparing this patent with that sued on in *Curtis v. Platt*, said of the latter: "It was specially to introduce improvements into the mechanical, means and arrangements which a previous patentee had used to obtain a well-known object in a well-known machine. Therefore in that case, in applying those words used by the judges, we must deal with the case before them and come to the conclusion, as I do, that what they meant was this, that where there is no novelty in the result, where neither the machine nor the result is new, there you must tie down the patentee, who claims an improvement in the machinery for producing in a known machine that result, strictly to the invention which he claims, and the mode of effecting the

(k) See also Lord Watson in *Tweeddale v. Ashworth*, 9 R. P. C. at p. 128; and in *Miller v. Clyde Bridge Steel Co.*, 9 R. P. C. at p. 478; Lord Davey in *Consolidated Car Heating Co. v. Came*, 20 R. P. C. at p. 766; Lord Shaw in *Ridd Milking Machine Co. v. Simplex Milking Machine Co.*, 33 R. P. C. at p. 317.

improvement which he says is his invention. But here the throwing coal on to the furnace by the intermittent radial action of a flap or door was new, and nothing of the kind had been done before. It is true there had been previous though imperfect machines for feeding furnaces automatically, but that had not been done previous to this machine by any intermittent radial action of a flap or door, as was done by the plaintiff, and apparently successfully done by him. In my opinion, therefore, these opinions expressed by the judges with reference to mere improvements in an old machine for an old purpose cannot lay down any law for a case like this, where the result of throwing coal on to the furnace by the intermittent radial action of the flap is first applied in a machine invented by the plaintiff. There was not only novelty in the machine, but there was novelty in the effect, and in the result to be produced by that machine" (1).

To sum up the effect of these two famous leading cases and the numerous judgments in which the principles therein laid down have been applied we venture upon the following statement of the law :—

The specification and claims must be construed in the light of the common knowledge in the art at the date of the letters patent. It must be determined by the Court whether the monopoly claimed is for the precise mechanism described or for the attainment of a result by any means substantially equivalent to the precise mechanism described. If the claim be construed to bear the latter meaning, and if in fact the attainment of the result be a novel achievement the claim will then cover mechanical equivalents for the mechanism described. But whether the attainment of the result be novel or old in fact, if the claim be construed as limited to the precise mechanism shown, the patentee must abide by the result of his limitation.

If a man has taken the pith of an invention, the fact that he

Improvement
does not

(1) See also Cotton, L.J., in *Ehrlich v. Ihlee*, 5 R. P. C. at p. 453; Lindley, L.J., in *Automatic Weighing Machine Co. v. National Exhibitions Association*, 9 R. P. C. at p. 44; Parker, J., in *Marconi v. British Radio Telegraph Co.*, 28 R. P. C. at p. 217; and see *Moore v. Thomson*, 7 R. P. C. 325.

has improved upon it is immaterial; he has nevertheless infringed (*m*). It is a very common delusion of infringers that because the infringing article presents advantages over the patented article and is perhaps itself the subject of a patent taken out by the infringer that this fact negatives infringement. The fact that the infringer has a patent is entirely immaterial to the question as to whether the article made or the process used embodies the invention claimed by the plaintiff. negative infringement.

The principles that underlie the question of infringement, by taking a part only of the invention, were very fully and clearly considered by Mr. Justice Wills in *The Incandescent Gas Light Co. v. The De Mare Incandescent Gas Light System* (13 R. P. C. at p. 330). In his judgment the learned judge deals with the means by which the relative importance of different parts of the invention is to be ascertained, and consequently in what part the substance lies, as follows:—"In dealing with the question of construction, I have carefully avoided any reference to the relative importance of different parts of the invention. In dealing with the question of infringement, it is impossible not to consider them. Infringement is a question of fact for the jury, if there be one; and the question is not whether the substantial part of the process, said to be an infringement, has been taken from the specification; but the very different one, whether what is done, or proposed to be done, takes from the patentee the substance of his invention. What the thing invented is must be gathered from the specification alone, and the patentee cannot escape from the thing he has claimed as the standard, and the only standard with which to compare the alleged infringement, so as to see if it constitutes substantially the appropriation of the thing claimed. When, however, you come to make that comparison, how can you escape from considering the relative magnitude and value of the things taken and of those left or varied? It is seldom that the infringer does the thing, the whole thing, and nothing Infringement by taking part only.

(*m*) *Neilson v. Harford*, 1 W. P. C. at p. 310; *United Telephone Co. v. Harrison*, 21 C. D. at p. 740; *Ehrlich v. Ihlee*, 5 R. P. C. at p. 454; *Wenham Gas Co. v. Champion Gas Co.*, 9 R. P. C. at p. 55; *Pilkington v. Massey*, 21 R. P. C. at p. 437. Relative importance of parts.

but the thing claimed by the specification. He always varies, adds, omits; and the only protection the patentee has in such a case lies, as has often been pointed out by every Court, from the House of Lords downwards, in the good sense of the tribunal which has to decide whether the substance of the invention has been pirated. It is contended by the defendants that what is important, and what is of subsidiary consequence, can only be gathered from the specification itself. I am satisfied that that neither is nor can be the law. . . . There are no means of ascertaining whether, notwithstanding additions or subtractions, the invention has been taken, except by seeing what they are worth as compared with the things which have been taken bodily from the invention." The earlier authorities of *Clark v. Adie* and *Proctor v. Bennis* were then analysed in detail (n).

The question of relative importance, therefore, remains one of fact to be decided on evidence. But in saying that the relative importance of parts of the invention is to be ascertained as a question of fact and by means outside a direct reference to the specification, the learned judge was clearly referring to cases in which the patentee has not given any indication of what he considers essential. Where, however, the patentee has expressly claimed some specific means of accomplishing an object, he will be tied down to that means, for it must be remembered that what is protected is what is claimed, and not all that is described.

Infringement
is of specified
claim only.

Lord Justice Romer said, in *Nobel's Explosives Co. v. Anderson* (11 R. P. C. at p. 128): "In order to make out infringement it must be established to the satisfaction of the Court that the alleged infringer, dealing with what he is doing as a matter of substance, is taking the invention claimed by the patent, not the invention which the patentee might have claimed, if he had been well advised or bolder, but that which he has in fact and substance claimed on a fair construction of the specification." In *Bunge v. Higginbotham*, Kekewich, J., said (18 R. P. C. at

(n) See also Lord Davey in *Consolidated Car Heating Co. v. Came*, 20 R. P. C. at p. 765; and Parker, J., in *Osram Lamp Works, Ltd. v. "Z" Electric Lamp Co.*, 29 R. P. C. at p. 424.

p. 206; and see 19 R. P. C. at p. 199), on this point of the substance of the combination: "But in order to ascertain whether any part of the combination, which is absent in the alleged infringement, can be dispensed with so as still to hold the latter to be an infringement, one must go back to the specification, and one must hear what the patentee himself has said about it. . . . You must find whether he considers the one part which has not been taken, to be an integral part of his invention, or perhaps it would be better to say an essential part of his invention."

Lord Alverstone, L.C.J., in *The Presto Gear Case and Components Co. v. Orme, Evans & Co.* (18 R. P. C. at p. 23), said: "In patent cases I have always felt that there is a line of thought which is most likely to lead you to the right result in the speediest way. The first thing, assuming you understand the alphabet of the science or art, is to clearly understand what was the previous state of knowledge. Having got, either by agreement or deduction from the evidence, a clear view as to what was the previous state of knowledge, you must then construe the specification with reference to that, disregarding issues of novelty or subject-matter which may arise in the particular case, and you then have to consider whether or not the infringement comes within the fair meaning of the claims—not anything else, but the claims read in the light of the previous state of knowledge, and without altering the words unduly in favour of the patentee or infringer."

How to approach infringement.

The cases in which a claim for a combination is alleged to be infringed do not differ in general principles from any other kind of infringement. But they are liable to give rise to difficulty under either of the following circumstances:—(a) A part only of the combination may be taken; or (b) A mechanical or chemical equivalent may be substituted for a portion of the combination.

Combinations how infringed.

In *Clark v. Adie* (10 Ch. at p. 675) Lord Justice James said: "A patent for a new combination or arrangement is to be entitled to the same protection, and on the same principles, as every other patent. In fact, every, or almost

every, patent is a patent for a new combination. The patent is for the entire combination; but there is, or may be, an essence or substance of the invention underlying the mere accident of form, and that invention, like every other invention, may be pirated by a theft in a disguised or mutilated form, and it will be in every case a question of fact, whether the alleged piracy is the same in substance and effect, or is a substantially new or different combination." And when the same case reached the House of Lords (2 A. C. 320), Lord Cairns, L.C., said: "One mode of infringement would be a very simple and clear one; the infringer would take the whole instrument from beginning to end. . . . About an infringement of that kind no question could arise. The second mode would be one which might occasion more difficulty. The infringer might not take the whole of the instrument here described, but he might take a certain number of parts of the instrument described; he might make an instrument which in many respects would resemble the patent instrument, but would not resemble it in all its parts. And there the question would be, either for a jury or for any tribunal which was judging of the facts of the case, whether that which was done by the alleged infringer amounted to a colourable departure from the instrument patented, and whether in what he had done he had not really taken and adopted the substance of the instrument patented. And it might well be, that if the instrument patented consisted of twelve different steps, producing in the result the improved clipper, an infringer who took eight or nine or ten of those steps might be held by the tribunal, judging of the patent to have taken in substance the pith and marrow of the invention, although there were one, two, three, four, or five steps which he might not actually have taken and represented upon his machine."

Lord Blackburn said (at p. 335): "I incline to agree with what was said in the Exchequer Chamber in the case of *Lister v. Leather* (8 E. & B. 1004; 27 L. J. Q. B. 296), that you cannot decide in the abstract whether the using of two parts, A and B, of a combination of A, B, and C, is or is not

using part of that invention; nor can you decide in the abstract the other question, which was somewhat discussed in the case of the sewing machine (*Foxwell v. Bostock*, 12 W. R. 723), whether or not the specification shows that A or B is sufficiently claimed as a part of the invention or not. I do not think that either of those questions can be decided in the abstract. I would wish—like the Exchequer Chamber in *Lister v. Leather*—before deciding it, to have before me the nature of the machine, in order that I may see which A, B, and C are, and what is their relation to each other.”

A patent for a combination is not infringed by taking separately the integers which are comprised in that combination. **Combination does not protect integers.** For some considerable time it was thought that the judgment in *Lister v. Leather* (8 E. & B. 1004) established the contrary proposition, but, as was pointed out by Fletcher Moulton, L.J., in his elaborate review of the authorities in *The British United Shoe Machinery Co., Ltd. v. A. Fussell & Sons, Ltd.* (25 R. P. C. at p. 653), the law on this point was not correctly stated in that case. It was made clear by Lord Cairns in *Clark v. Adie* (L. R. 2 A. C. at p. 321): “Suppose, my lords, that in a patent you have a patentee claiming protection for an invention consisting of parts which I will designate as A, B, C, and D; he may at the same time claim that as to one of those parts, D, it is itself a new thing, and that as to another of those parts, C, it is itself a combination of things which possibly were old in themselves, but which, put together and used as he puts them together and uses them, produce a result so new that he is entitled to protection for it as a new invention. In a patent of that kind the monopoly would or might be held to be granted, not only to the whole and complete thing described, but to those subordinate integers entering into the whole which I have described. But then, my lords, the invention must be described in that way; it must be made plain to ordinary apprehension, upon the ordinary rules of construction, that the patentee has had in his mind, and has intended to claim, protection for those subordinate integers; and moreover he is, as was said by the Lords Justices, at the peril of justifying those

subordinate integers as themselves matters which ought properly to form the subject of a patent of invention."

Substitution
of equiva-
lents.

There is a description of imitation which is produced by the substitution of chemical or mechanical equivalents for the specific integers which the patentee has claimed in combination. To the unscientific eye there is a total dissimilarity between the infringing machine or process and the original; but, none the less, it is a mere imitation—it is a robbery of the ideas and intentions of the first inventor, but a robbery conducted in a scientific manner. A great deal of confusion has been caused by misunderstanding the term "mechanical equivalent." The use of a mechanical equivalent for that which the plaintiff has invented, which at the time of the act complained of is known as an equivalent, is always an infringement. It is not true to say that "the doctrine of mechanical equivalents does not apply in the *Curtis v. Platt* type of cases." A patent which did not cover all known mechanical equivalents would be void for want of invention. The narrowest claim for a particular means of attaining an old ultimate result may be infringed by the use of a mechanical or chemical equivalent, *i.e.*, an obvious method of carrying out the same invention, a method which a skilled mechanic or chemist, having once seen the original invention, could at once suggest and apply without the necessity for any inventive power whatever. The confusion has arisen partly because the expression "new result" has been loosely applied, sometimes to mean the ultimate result, and sometimes to mean the new effect immediately produced by the invention. In this latter sense all inventions must produce a new result, or they would fail for want of utility. Things may be mechanical equivalents for many purposes, and yet not for the purpose immediately at hand. A fire-tongs is in many aspects the mechanical equivalent of a dental forceps, but not for the purpose of extracting teeth. Sulphuric acid is a chemical equivalent for nitric acid as far as the reddening of litmus is concerned, but is far from an equivalent in the manufacture of explosives. Equivalents may be substituted for parts as well as for the whole invention, so that it may happen that a patent may be taken out for a combination of three parts, and an

equivalent may be substituted for each part, so that in effect the whole invention may be changed, and yet there may be a most flagrant infringement.

Some difference is to be observed between the treatment accorded by the Courts to chemical cases and mechanical cases respectively. In the case of an invention which consists of a chemical process the state of human knowledge makes it exceedingly difficult to predict what will happen if an ingredient or a step in the process is changed, and accordingly patentees are constrained in the majority of cases to claiming the precise combination of steps described. Occasionally, however, it may happen that the patentee may grasp the broad principle involved and make a broad claim in which the steps are described in generic terms, and in such a case the substitution of equivalent steps for the specific ones detailed in the example given may nevertheless fall within the terms of the claim and constitute an infringement. In such a case, of course, the patentee runs the risk that his generic terms may include an unworkable example, in which case his patent will be invalid (o).

Take, for instance, the case of *Stevens v. Keating* (2 W. P. C. 181). Here the patent was for the manufacture of cement. The cement was made from gypsum (sulphate of lime) by admixing it with pearl-ash (carbonate of potash) and sulphuric acid. Chemically, the effect was this: A salt, sulphate of potash, was produced; this, combined with the sulphate of lime, produced a double salt, which, when submitted to a high temperature and subsequently ground to a fine powder, constituted the cement. The specification terminated thus: "And whereas other alkalis and acids, besides those hereinbefore mentioned, will answer the purposes of my said invention, though none that I have tried have answered so well as the alkali and acid hereinbefore set forth, and whereas I claim as my invention the processes of mixing the powdered materials, alkalis, and acids, as hereinbefore described, and subsequently burning, heating or calcining the same, for the purposes hereinbefore set forth." The principle of this discovery

(o) See p. 96, ante.

was that sulphate of lime combined with salts of potash or soda, and, when so combined, produced a substance which set very hard. The defendant substituted for the pearl-ash and sulphuric acid a salt which is a chemical equivalent, borate of soda (borax), and heated that with gypsum, producing in the same manner a double salt, and with the same resulting property of setting. This was properly held to be an infringement, but inasmuch as considerable experiment was necessary in order to find out what examples of acids and alkalis could usefully be employed, the patent was held to be invalid.

On the other hand, if the claim be restricted to the specific example shown, then on account of the difficulty with which the result of the substitution of another ingredient can be foreseen, or in other words, the fact that in most cases it was not known at the date of the patent whether the defendant's substituted ingredient or step was in fact an equivalent for what the patentees claimed, has in many cases been held to prevent the substitution from being considered an infringement.

In *Unwin v. Heath* (2 W. P. C. 228-295 ; 5 H. L. C. 505) the patentee said in his specification : "I propose to make an improved quality of cast steel, by introducing into a crucible bars of common blistered steel, broken, as usual, into fragments, or mixtures of cast or malleable iron, or malleable iron and carbonaceous matters, *along with from one to three per cent. of their weight of carburet of manganese*, and exposing the crucible to the proper heat for melting the materials, which are, when fluid, to be poured into an ingot mould in the usual manner; but I do not claim the use of any such mixture of cast and malleable iron, or malleable iron and carbonaceous matter, as any part of my invention, *but only the use of carburet of manganese in any process for the conversion of iron into cast steel.*" In another part of the specification he said : "I claim the employment of *carburet of manganese* in preparing an improved cast steel." At the date of the patent carburet of manganese was well known and very expensive. The defendant heated broken iron with coal tar and oxide of manganese—an inexpensive process. The evidence of the plaintiff was to the effect that carburet of manganese was actually formed in the

defendant's melting pot at the moment of fusion. The House of Lords after taking the opinions of the judges, decided that there had been no infringement. Lord Cranworth, L.C., said (2 W. P. C. at p. 319): "There is no evidence whatever tending to prove that, at the date of the patent, it was known to persons acquainted with the subject of manufacturing cast steel, that coal tar and oxide of manganese would be chemical equivalents for the carburet of manganese claimed by the plaintiff. -Indeed, it is obvious that the discovery of such equivalents was made after the use of the carburet, as a distinct metallic substance had been some short time in operation. It was itself a most valuable discovery, and would legitimately have formed the subject of a new patent. . . . On the short ground, therefore, that the invention claimed is for the use of a particular metallic substance, namely, carburet of manganese, in certain definite proportions according to the weight of the steel under fusion, and that no such substance, nor any equivalent for it, known to be such at the date of the specification, was used by the defendant, I think that there was no evidence of infringement." . . . This method of reasoning was followed by Moulton, L.J., in *Vidal Dyes Syndicate v. Levinstein, Ltd.* (29 R. P. C. at pp. 275-277). Parker, J., however, in *Marconi v. British Radio Telegraph Co.* (28 R. P. C. at p. 217), a case concerning electrical inventions which may be considered in much the same light as chemical inventions, preferred to base his decision, in which he held infringement, upon the proposition of law that infringement is a matter depending on the construction of the claim alone, and that the question of whether equivalents were known to be such or not, at the date of the patent was immaterial, or at any rate inconclusive. The reasoning of Lord Parker was followed in the House of Lords by Lord Wrenbury in *Fellows v. Lench* (34 R. P. C. at p. 61), and it is submitted, is supported by the reasoning of Lord Brougham in *Unwin v. Heath* (5 H. L. C. at p. 550). "I come at once to the case which is chiefly relied upon, namely, *Stevens v. Keating*, which came before Lord Cottenham, and in which, the patent being for making cement by uniting gypsum with an acid and an alkali, the defendant made cement (which was the

alleged infringement) by uniting gypsum with borax, and it being discovered that borax was composed of an acid and an alkali, Lord Cottenham held that uniting gypsum with borax was uniting gypsum with an acid and an alkali; and that consequently there was an infringement of the patent, which was granted for gypsum united with an acid and an alkali. . . . But I very much question whether the judgment would have been in the affirmative upon the question of infringement or no infringement, if, instead of the patent having been for uniting gypsum with an acid and an alkali, the patent had been for making cement by uniting gypsum with borax; and it being found that borax was compounded of an acid and an alkali, it then had been contended that any compounding of an acid and an alkali was an infringement of the patent, inasmuch as the materials of borax being an acid and an alkali, and the patent being for continuing an acid and an alkali with gypsum to make cement, therefore there was an infringement. In my opinion, the proposition affirmed by Lord Cottenham in this decision would not at all lead by any necessity whatever to giving a similar decision upon the converse, where the case was such as I have just supposed."

In *Nobel's Explosives Co. v. Anderson* (11 R. P. C. 115, 519; 12 R. P. C. 164), the object of the invention was the production of an explosive suitable for propelling projectiles, in the use of which explosive perfect combustion might be obtained. The patentee in his specification confined his claim to powder made from soluble nitro-cellulose and nitro-glycerine. It was not known at the date of the patent that insoluble nitro-cellulose could be used in the place of the soluble to effect the same object in a similar manner, and, in fact, any one reading the specification of the patentee would be led to the conclusion that he was to avoid the use of insoluble nitro-cellulose. It was held by Romer, J., whose decision was confirmed in the Court of Appeal and the House of Lords, that the use of the insoluble nitro-cellulose, although in a similar way and to effect a similar result to that attained by the soluble nitro-cellulose, did not amount to an infringement of the patent.

In mechanical cases the state of human knowledge permits of the behaviour of a substituted element being foretold with considerable accuracy, and it is harder to escape infringement. The difference between the two classes of cases was pointed out by Sir F. Pollock, C.B., in the case (cited above) of *Stevens v. Keating* (2 W. P. C. at pp. 188, 189): "I may say that I do not quite go along with the doctrine of equivalents in chemistry, applied in the same way as in mechanics and those matters to which you can apply the principles of the exact sciences. . . . In the mechanical sciences, or wherever you can apply the exact sciences, you can frequently predict the results without the slightest difficulty, and with the same certainty as that with which a skilful arithmetician can tell you what will be the amount of certain numbers added together, and that a certain other set of numbers apparently differing from them altogether will, when added together, produce the same result. With precisely the same certainty a skilful mechanic will tell you that such and such a combination will produce a result, and that such and such another combination, to the ordinary eye apparently totally different, will produce precisely the same result . . . so that however different they may appear to the eye, they are to the mind precisely the same. I do not think that doctrine applies altogether to the case of chemistry, for although you can predict with confidence in mechanics in some instances, and in some cases where mathematics can be applied, in chemistry you almost entirely fail. You cannot—because sulphuric acid will succeed—tell at all that nitric acid will succeed, or that any other acid will succeed until you have tried. They do not exist in any relation to each other as numbers do, or as mechanical science presents to you the different mechanical powers. You cannot anticipate the result; it is a mere question of result upon experiment" (*p*).

Nevertheless, it may sometimes occur even in a mechanical case that the operation involved is of such an obscure character that the behaviour of substituted elements could not be

(*p*) See also Moulton, L.J., in *Vidal Dyes Syndicate v. Levinstein, Ltd.*, 29 R. P. C. at pp. 275-277. The reasoning can also in some degree be applied to the question of Subject-matter (see p. 49, ante).

foretold with any degree of certainty, and they cannot in such circumstances be regarded as equivalents (*q*).

As an instance of an infringement involving the use of a mechanical equivalent we may cite *Russell v. Cowley* (1 W. P. C., see p. 462), in which the invention claimed was the bringing to a welding heat of a long piece of iron of the proper quality, after having turned up its edges, and drawing it through a hole of the size of the intended tube, so as to compress together the edges and give it a complete circular form. The defendants turned up the skelp, and, after heating it in the furnace, passed it through two rollers with grooves: Held as a fact, that the two rollers with grooves were a mere mechanical equivalent for the hole through which the iron was passed according to the plaintiff's invention, and that the patent had been infringed (*r*).

Patenting or granting of licence is not infringing.

Taking out a patent for a process or machine that infringes a prior patent does not amount to infringement (*s*), nor does the granting of a licence to manufacture under a subsequent patent amount to infringement (*t*); infringement depends upon what the alleged infringer has *done*. There are three ways in which a patent may be infringed:—

1. By making the patented article or working the process.
2. By using.
3. By selling.

Infringement by agents and servants.

A person may infringe a patent by making the article himself, or by his agent, or by his servants. The agent and servants, it is true, will be considered as equally infringing the patent, and actions may be brought against them individually, but that in no way absolves the person who employs them for that purpose. In *Sylkes v. Howarth* (L. R. 12 Ch. D. 826) the invention consisted in the application of cards or strips of leather covered with wire to rollers at "wide distances." A person who contracted to clothe rollers and supplied to a "nailer" cards of such width that when applied to the rollers they must of

(*q*) See, e.g., *Fellows v. Lench*, 34 R. P. C., per Lord Wrenbury, at p. 60.

(*s*) *Tweeddale v. Ashworth*, 7 R. P. C. at p. 431.

(*r*) See also *Benno Jaffé Fabrik v. Richardeon*, 11 R. P. C. at p. 270.

(*t*) *Montgomerie v. Paterson*, 11 R. P. C. 221.