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THE
PRESENT LAW AND PRACTICE
RELATING TO
LETTERS PATENT FOR INVENTIONS

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RELATING TO

LETTERS PATENT FOR INVENTIONS

BY

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TO

THE RIGHT HONOURABLE

LORD MOULTON, P.C., F.R.S.

THIS WORK IS

DEDICATED

PREFACE

THE English Law of Letters Patent is of the greatest interest both from the legal and the commercial point of view. It was the forerunner and the model of the Patent Laws of all countries; in the past it has greatly helped to build up the commercial supremacy of this Country, and on the certainty and justness of this law and its administration depends to-day the willingness of capital to assist in developing new inventions.

But the subject is one whose treatment presents great difficulties to the author, since the majority of the reported decisions really turn on questions of fact. The Courts have quite properly realised this and the practice of quoting numerous authorities on such questions as subject-matter and infringement has greatly decreased. Nevertheless the citation of a really apposite decision is often of the greatest value, and the just appreciation of prior decisions is also of great assistance to those who have to advise on questions relating to Letters Patent. I have therefore attempted to give in a digested and classified form the decisive points in all such cases as may be likely to be of assistance for either of these purposes.

This work presents the law and practice in regard to Letters Patent as it stood at the end of 1912. Although the basic principles of this law have remained unchanged, recent legislation has greatly affected the practice. The Patents Act of 1907 has also introduced many fresh problems for the practitioner, and some of the most important of these —as for example those referring to restrictive conditions in licences, a point to which public attention has been recently called—have not yet had the benefit of judicial elucidation. In such cases the legal and practical applications of the new provisions have been fully discussed with a view to assisting those who may have to advise thereon.

The practice in the High Court has been fully treated, as there are many points of frequent occurrence in patent cases with which those who only occasionally have to deal with the subject are necessarily unfamiliar.

Special attention has been paid to the practice of the Patent Office. Unfortunately until recent years the decisions of the Comptroller were not reported, and many important and well-defined points of practice were little known. Happily the present Comptroller General has introduced a change in this respect, and I have endeavoured to make the fullest use of the fresh materials supplied by the reports of his decisions. I take this opportunity of expressing my thanks for the great assistance which has been rendered to me in regard to the chapter on Patent Office Practice by Mr. W. J. Tennant, who has placed his great experience in the matter at my disposal.

Some suggestions have also been added as to the method of drafting specifications. The importance of this subject cannot be overrated, as the existence of a clear and uniform system of drafting both lightens the labours of the Courts and greatly increases the security of Letters Patent.

In conclusion I wish to express my thanks to Mr. E. W. Sheppee and to Mr. J. H. Evans-Jackson for their assistance in preparing this book for the press.

H. FLETCHER MOULTON.

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ABBREVIATIONS AND REFERENCES

The following abbreviations should be noted—

C.G. - -	Comptroller General.
I.H. - -	Inner House.
L.O. - -	Law Officer.
O.H. - -	Outer House.
Carp. - -	Carpmael's Patent Cases.
Davies. - -	Davies Patent Cases.
Goodeve -	Goodeve's Patent Cases.
Griff. - -	Griffin's Patent Cases (1887).
Griffin L.O.C.	Griffin's Patent Cases decided by the Comptroller General and Law Officers (1888).
Macrory. -	Macrory's Patent Cases.
W.P.C. - -	Webster's Patent Cases.

References to the *Law Journal* and the *Law Times* are to the new series unless otherwise stated. References to "Webster's Patent Cases" to the first volume unless otherwise stated.

The References to the reports of the Court of Sessions cases are given with the series in Arabic and the volume in Roman numerals, thus 4 S. XII 100.

References to sections refer to the Patents and Designs Act, 1907 (7 Ed. VII. c. 29), unless otherwise stated.

The dates of cases in the Reports of Patent Cases are not inserted in the notes, as each volume contains the cases for one year, the first volume having those reported in 1884.

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Page 124. Adie *v.* Clark (1876), 14 W. R. 1008, *should be* (1876), 24 W. R. 1008.

Page 192. Crossley *v.* Derby Gas Light Coy. (1834), 44 L. J. (CH.) 25, *should be* (1834), 4 L. J. (CH.) 25.

Page 199. Chadburn *v.* Robinson, 18 R. P. C. 468, *should be* 22 R. P. C. 468.

LAW OF PATENTS

CHAPTER I

PROPERTY IN LETTERS PATENT

Nature of Patent Rights

Meaning of patent.

THE Letters Patent dealt with in this book are grants of the sole privilege of exercising an invention.

Early patents.

The granting to private persons or corporations of the monopoly of a trade or manufacture was an exercise of the Royal Prerogative which at one time was largely used. Such grants were, however, unfavourably regarded by the Courts, and it was held that the grant by the King of the monopoly of an existing trade was void at common law, unless it was also legalised by the consent of Parliament or by prescription, since the effect of such a monopoly was "to take away free trade, which is the birthright of every subject" (*a*).

Statute of monopolies.

The question of monopolies was dealt with by Parliament in 1624 by the passing of the Statute of Monopolies (*b*). This Statute declared monopolies (*c*) in general to be bad. But the case of new manufactures was excepted by the sixth section, which was as follows :—

"Provided also, and be it declared and enacted, 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

(*a*) The Clothworkers of Ipswich (1615), Godbolt 252.

(*b*) 21 Jac. 1, c. 3. See also *Darcy* v. *Allin* (1602), Noy 178.

(*c*) Coke defines a monopoly as "an institution or allowance by the King by his grant commission or otherwise to any person or persons, bodies politique or corporate of or for the sole buying selling making working or using of any thing whereby any person or persons bodies politique or corporate are sought to be restrained of any freedome or liberty that they had before or hindered in their lawful trade," Inst. part III., c. 85.

at the time of making such Letters Patent and grants shall not use, so as also they be not contrary to the law, nor mischievous to the State, by raising prices of commodities at home, or hurt of trade or generally inconvenient. The said fourteen years to be accounted from the date of the first Letters Patent or grants of such privilege hereafter to be made, but that the same shall be of such force as they should be, if this Act had never been made, and of none other."

This section is quoted in full since it still forms the basis of the whole of the English Patent Law, and it may be said of the patent laws of the world. Although in form it merely declares that certain grants of the sole privilege of working shall have the force they formerly had, it was in fact, and has always been treated by the judges as being, declaratory as to what grants of this kind were legal (*d*). There is no reported case since the passing of the statute in which a patent satisfying the conditions here laid down has been declared void at common law.

Statutes relating to patents.

A number of statutes have since been passed dealing with the subject of patents for inventions (*e*), but these have dealt mainly with the machinery for the grant and enforcement of patents, and the question as to whether the grant is one which might legally be made is still ordinarily determined by the above section.

(*d*) *Australian Gold Recovery Coy.* v. *Lake View Consols Coy.*, 18 R. P. C. 114; *Feather* v. *The Queen* (1865), 6 B. & S. 257; *cf.* Coke's Institutes, part III., c. 85.

The reason given by Coke why such privileges, even if fulfilling the Statutory conditions, might yet be declared illegal, was to provide for cases where the long period of the grant might be found to be prejudicial to apprentices.

(*e*) Statutory Declarations Act, 1835, s. 11 (5 & 6 Will. 4, c. 62).

Statute 5 & 6 Will. 4, c. 83.

Statute 2 & 3 Vict. c. 67.

Statute 7 & 8 Vict. c. 69.

The Patent Law Amendment Act, 1852 (15 & 16 Vict. c. 83).

Statute 16 & 17 Vict. c. 115.

Statute 22 Vict. c. 13.

The Industrial Exhibitions Act, 1865 (28 & 29 Vict. c. 3).

The Protection of Inventions Act, 1870 (33 & 34 Vict. c. 27).

The Great Seal Act, 1880 (43 & 44 Vict. c. 10).

The Revenue, Friendly Societies, and National Debt Act, 1882 (45 & 46 Vict. c. 72).

Patents, Designs and Trade Marks Act, 1883 (46 & 47 Vict. c. 57).

Patents, Designs, and Trade Marks (Amendment) Act, 1885 (48 & 49 Vict. c. 63).

Patents Act, 1886 (49 & 50 Vict. c. 37).

Patents, Designs, and Trade Marks Act, 1888 (51 & 52 Vict. c. 50).

Patents Act, 1901 (1 Ed. VII. c. 19).

Patents Act, 1902 (2 Ed. VII. c. 34).

Patents and Designs (Amendment) Act, 1907 (7 Ed. VII. c. 28).

Patents and Designs Act, 1907 (7 Ed. VII. c. 29).

Patents and Designs Act, 1908 (8 Ed. VII. c. 4).

The provisions as to patents contained in all these Statutes, except the last two, have been repealed. All the provisions of the 1907 Act except those contained in s. 33, s. 37, and s. 41 (1) apply to patents of any date.

Such grants were formerly mere voluntary exercises of the Royal Prerogative, and undoubtedly then no one had the right to the grant of a patent. The present Patent Act, like the Act of 1883, saves the prerogative of the Crown (*g*), but since a complete machinery is provided for the granting of patents; and the officers appointed by the Act are directed either expressly or by implication to carry out each step (*h*) necessary for such grant, provided that the applicant has an invention and has fulfilled the proper formalities, it may be said that Parliament has now given an inventor the right to a patent under certain conditions (*i*). Right to a patent.

Patents were formerly issued by the Lord Chancellor under the Great Seal, but by the Act of 1883 and the present Act a Patent Office has been created having its own seal (*k*). Seal of Patent Office.

A patent can be granted to a British subject or *alien ami*, but it is doubtful whether it could be granted to an *alien enemi* or to any person in trust for him (*m*). It can be granted to one or more persons or to a corporation, but the grantees must include the inventor, or in the case of his death his personal representatives (*n*). Persons to whom patents may be granted.

The Letters Patent granted by the Patent Office are of two classes, (1) Ordinary Letters Patent; (2) Patents of Addition (*o*). Classes of patents.

Ordinary Letters Patent are granted for a term of fourteen years from the date of application, but are subject to defeasance if the patentee fails to pay renewal fees or to supply articles for the public service (*p*). There is also a provision for defeasance if it should be made to appear to six members of the Privy Council that the grant is contrary to law or prejudicial or inconvenient to the King's subjects in general, or that the invention was not new, or the grantee was not the first and true inventor, but there is no reported case of defeasance under this provision. Ordinary patents.

(*g*) Sect. 27. As to Letters Patent still being an exercise of the prerogative, see *Von Heyden* v. *Neudstadt* (1880), 14 Ch. D. 230.

(*h*) *Cf.* s. 3, s. 6, s. 7 (3), s. 12.

(*i*) As to whether this right can be enforced by mandamus, see p. 200.

(*k*) Sect. 14 and Patents, Designs and Trade Marks Act, 1883 (46 & 47 Vict. c. 57), s. 12.

(*m*) *Bloxam* v. *Elsee* (1825), 1 Car. & Payne 558; *Beard* v. *Egerton* (1846), 15 L. J. (C. P.) 270.

(*n*) See p. 253.

(*o*) Special grants may be made in cases of revocation on the ground of fraud, see p. 216, and in cases of prolongation, see p. 318.

(*p*) See form of letters patent, Appendix, *post*. The fourteen years includes day of date, *Russel* v. *Ledsam* (1845), 9 Jur. (o. s.) 557. *Semble*, even after a defeasance an action may be brought for infringement before lapse. See *Hill* v. *Mount* (1856), 25 L. J. (C. P.) 190.

Apart from the effect of the defeasance clauses Letters Patent are liable to be terminated by revocation on various grounds (*q*). They may also come to an end by surrender (*r*), and possibly by merger in the Crown in the absence of any person holding the legal interest (*s*). They may be restricted in scope by amendment (*t*), or in operation by the grant of compulsory licences (*u*).

Patents of addition.

These differ from other grants in that no renewal fees are payable, and that they come to an end with the original patent. Otherwise it would seem that they have the same effect, and are subject to the same restrictions as other grants (*x*).

Nature of patent right.

Although the question of the grant, etc., of patents has now been dealt with by Act of Parliament, and the grant is always made in one of the forms authorised by the Act, or the rules under it (*y*), the rights of the patentee are wholly derived from, and to be found in, the grant itself (*z*).

The patent so issued is in the form of a grant from the Crown which is twofold in its nature, in that it firstly gives to the patentee (*a*) the sole right to make, use, exercise, and vend within the United Kingdom and the Isle of Man (*b*) the invention patented, and secondly forbids others to do any of these acts. The first portion of this right was of importance in the early days of Letters Patent as freeing the patentee from the interference of the various trade guilds, but is now chiefly of historic interest (*c*). The second portion is in the nature of a *chose in action* (*d*), or a right which the patentee may assert whereby the patentee derives his profit either by maintaining

(*q*) See Chapter XI.

(*r*) Sect. 26 (3).

(*s*) See *In re Taylor's Agreement Trusts*, 21 R. P. C. 713; *Heath's Patent*, 29 R. P. C. 390.

(*t*) See Chapter XIII.

(*u*) See pp. 251, *et seq.*

(*x*) See p. 262.

(*y*) Sect. 14 (2).

(*z*) See p. 156, *n.* (*a*).

(*a*) This term includes executors, administrators, and assigns; see also p. 291.

(*b*) Besides the privileges in the United Kingdom, the grant gives the patentee the right to acquire similar privileges in certain British possessions by registering the grant there. The rights under the International Convention (see *post*, p. 259) arise from the application not from the grant.

(*c*) See Gordon on Monopolies, p. 121. A patent, however, gives no right to work the invention if it infringes an earlier patent. See *Saxby* v. *Kennett* (1873), 42 L. J. (EX.) 137; *Steers* v. *Rogers*, 10 R. P. C. 251, H. L. See also *Stead* v. *Carey* (1845), 14 L. J. (C. P.) 177.

(*d*) *British Mutoscope Coy.* v. *Homer*, 18 R. P. C. 177; *Heath's Patent*, 29 R. P. C. 390, and *Steers* v. *Rogers*, *supra*.

Stephen (Commentaries, Vol. II. p. 969) defines the patent right as an "incorporeal chattel," but *cf. Heath's Patent*, *supra*. It also comes within the definition of a "Franchise." *R.* v. *County Court Judge of Halifax*, 8 R. P. C. 338.

for himself a monopoly of the manufacture, with the extra profits that flow from such monopoly, or by obtaining sums from others who wish to use the invention for abstaining from asserting his full rights, that is to say, by granting licences.

Courts having patent jurisdiction.

This right must in England be asserted in the High Court or in the County Palatine Court, which have by the Act sole jurisdiction (*e*).

Effect of patent against Crown.

The patent is of the same effect against the Crown as against a subject, but any Government Department may use the invention by themselves and others on terms to be agreed either before or after use, or in default of agreement to be settled by the Treasury (*f*). Also, although the prohibition clause is in terms only addressed to the King's subjects, it has been held that its effect extends to foreigners interfering with the sole privilege granted (*g*).

Whether grant is voluntary or for consideration.

There has in the past been much discussion as to whether the grant is a purely voluntary one by the Crown without any consideration, or whether the inventor is to be considered as having given good consideration by the communication of his invention. The chief importance of the point is on the question as to whether the grant and specification are to be construed strictly against the grantee or not. It may be said that, at any rate as far as the construction of the specification is concerned, the view, powerfully upheld by Lord Eldon, that the invention communicated is consideration for the grant has in fact prevailed (*h*).

(*e*) *R.* v. *County Court Judge of Halifax*, *supra*. The Court were also of opinion that the jurisdiction of the County Court was also ousted, where the validity was in question, by sect. 56 of the County Court Act, 1888, since the trial would involve the investigation of the title to a Franchise.

(*f*) Sect. 29. This section was pleaded as a defence in *Nobel's Explosive Coy., Ltd.* v. *Anderson*, 11 R. P. C. 115, but the plea was not relied on at the trial. In this respect the inventor's rights are increased by the Statute, since at common law the patent was ineffectual against the Crown: *Feather* v. *The Queen* (1866), 35 L. J. (Q. B.) 200; *Ex parte Pering* (1836), 4 A. & E. 949. The only way of enforcing the right is by action against the agent using the invention since infringement being a tort there cannot be a Petition of Right in respect of it: *Feather* v. *The Queen*, *supra*. The right of a Government department to use an invention may now be exercised through contractors, sect. 29; formerly it was otherwise: *Dixon* v. *London Small Arms Coy.* (1876), 1 A. C. 632.

(*g*) *Caldwell* v. *Vanvlissingen* (1851), 9 Hare, 415.

(*h*) See *per* Lord Eldon in *Williams* v. *Williams* (1817), 3 Mer. 157, and *Australian Gold Recovery Coy.* v. *Lake View Consols Coy.*, 18 R. P. C. 114, P. C. See *contra*—*Feather* v. *The Queen*, *ubi supra*, at p. 205; see also p. 306, *n.* (*e*).

Devolution of Patent Rights

State of the law as to property in patents.

The whole subject of property in Letters Patent is but meagrely covered by judicial decisions, and many of these decisions are based on suggested analogies between real property and Letters Patent which afford a somewhat unsatisfactory method of deciding such questions (*i*), and may lead to results which are obviously unjust (*k*). This difficulty is aggravated by the inconsistent and indefinite usage of the term "patentee" both in the Act and in judicial language (*l*).

Devolution of property.

The property in Letters Patent can pass—

(*a*) By devolution of law.

(*b*) By assignment.

Devolution of law.

Property in Letters Patent passes by devolution of law by the death or bankruptcy of the patentee. Letters Patent are personal property both by English and Scotch law (*m*), and pass to the personal representatives of the deceased patentee (*n*). In the case of bankruptcy the property has always vested in the assignee or trustee in bankruptcy (*o*). Letters Patent cannot be taken in execution or be reached by a judgment creditor otherwise than by bankruptcy (*p*).

In the case of the absence of personal representatives, or in the case of a company which has been wound up being the owner, the patent probably merges in the Crown. But if there is an equitable owner such equitable owner may be registered as proprietor (*q*).

In the case of an inventor dying before application for Letters Patent his personal representatives may apply for letters patent in respect of his invention (*r*).

Assignment.

Letters Patent being a grant can only be assigned by deed (*s*), consequently an agent to be able to assign must have

(*i*) There is, for example, no analogy in the case of Letters Patent to the rights arising from possession as distinguished from those arising from property.

(*k*) *E.g.* the decision that in the case of joint patentees the survivor took the whole benefit, see p. 131, *n.* (*s*).

(*l*) See p. 291.

(*m*) *Attorney-General* v. *Lord Oswald* (1848), 2 S. X. 969.

(*n*) See p. 12.

(*o*) *Hess* v. *Stevenson* (1803), 3 B. & P. 505.

(*p*) 7 Ed. VII. c. 29, s. 45. See *British Mutoscope Coy., Ltd.* v. *Homer*, 18 R. P. C. 177; and *cf.* also *Attorney-General* v. *Lord Oswald*, *supra*, where the statement in Bells' Commentaries, Vol. I. p. 122, that a patent is "unattachable by any diligence but adjudication" was referred to with approval. See also *Edwards & Coy.* v. *Pickard*, [1909] 2 K. B. 963, C. A.

(*q*) *Taylor's Agreement Trusts*, 21 R. P. C. 713; *Heath's Patent*, 29 R. P. C. 390.

(*r*) Sect. 45.

(*s*) Coke upon Lytt. 172 (*a*). See also *Stewart* v. *Casey*, 9 R. P. C. at page 11, but *cf.* *King* v. *Oliver & Coy.*,

authority under seal (*t*). It would seem that there can be no assignment until after the grant has in fact been made (*u*). In the case of a bankrupt an assignment needs the consent of his trustee (*x*).

An assignment may either be immediate or take effect on the happening of a future event (*y*), and likewise the assignment may provide for the revesting of a patent on the happening of a future event, or the default of the assignee, and the patent then revests automatically (*z*).

Partial assignment.

The assignment may be of the whole patent or of part of the patent. Such partial assignment may be—

(1) Of an undivided share (*a*).

(2) Of a separate part of the invention (*b*).

(3) Of the patent right for a particular area (*c*).

An assignment of a part of a patent passes a legal interest (*d*). The position of assignees of a portion of a patent is dealt with later (*e*).

Survival and transmission of causes of action.

There seems little doubt that an action for infringement committed during the life of a patentee survives to his personal representatives (*f*). The rules against champerty and maintenance would probably prevent an assignment of the right to sue for past infringement unless such assignment were to a person already equitably interested in the patent (*g*).

Covenants and recitals.

Covenants and recitals in assignments of patents will be interpreted as in other assignments, *e.g.* as to their being limited or unlimited covenants for title (*h*). There is no warranty

Ltd., 1 R. P. C. 23, 42, where an agreement, which seems not to have been under seal, was treated by the Court as an assignment. There are no reported decisions as to the rights of assignees with regard to royalty, covenants, etc., in licences granted prior to assignment.

(*t*) *Haslehurst* v. *Rylands*, 9 R. P. C. 1.

(*u*) *E. M. Bowden's Patents Syndicate, Ltd.* v. *Herbert Smith & Coy.*, 21 R. P. C. 438, and 1910 E.

(*x*) *Manning's Patent*, 20 R. P. C. 74.

(*y*) *Cartwright* v. *Armatt* (1799), Davies 240.

(*z*) *King* v. *Oliver*, 1 R. P. C. 23, 42.

(*a*) *Walton* v. *Lavater* (1860), 29 L. J. (C. P.) 279; *Anderson* v. *Patent Oxonite Coy.*, 3 R. P. C. 279.

(*b*) *Dunnicliffe* v. *Mallet* (1859), 7 C. B. N. S. 209.

(*c*) Such an assignment came in question in *Actiengesellschaft für Cartonnägen Industrie* v. *Temler*, 18 R. P. C. 6.

(*d*) *Walton* v. *Lavater*, *supra*.

(*e*) Pp. 12, *et seq.*

(*f*) See *Baley and Sons* v. *Dalton* (1887), 35 Ch. D. 700 (a trade mark case). The survival of the cause of action for infringement of a patent seems to have been assumed by WARRINGTON, J., in *E. M. Bowden's Patents Syndicate, Ltd.* v. *Herbert Smith & Coy.*, 21 R. P. C. 438.

(*g*) See the *United Horseshoe Coy.* v. *Stewart & Coy.*, 3 R. P. C. 141, and p. 196, *n.* (*l*), where damages were given from the date when the plaintiffs became equitable owners. The point was not considered in the H. L.

(*h*) *Hess* v. *Stevenson* (1808), Davies 244. Although such assignments do not come within the Conveyancing Act, it is common to use the phrase

of, or covenant for, validity implied by an assignment of a patent, nor is such a covenant included in the covenant for title (*i*).

Although there is no implied covenant for validity an assignor is not allowed to dispute validity against his assignee, since to do so would be against his deed (*k*), but this does not apply to an assignee from the patentee's trustee in bankruptcy (*l*). A recital as to questions affecting validity would bind both assignor and assignee unless it appeared from the deed that it was intended to be the statement of the assignor alone (*m*).

Covenants constituting a charge.

A covenant by the assignee for himself and his assigns to pay a certain proportion of the profits arising out of the patent, so as to amount to a charge on the patent, binds legal assignees taking with notice, but not equitable assignees, but an independent covenant to pay a certain sum not necessarily arising out of the patent, and not constituting a charge or encumbrance, would not be directly enforceable against assignees (*n*).

Agreements with regard to patents.

Agreements for the sale of patents need not be under seal or even in writing (*o*). The ordinary rules of law apply to such agreements and specific performance of contracts for the sale of British Letters Patent will be granted if the Letters Patent

"as beneficial owner" to imply the ordinary covenants for title. See *Guyot* v. *Thomson*, 11 R. P. C. 594, C. A.

(*i*) *Hall* v. *Conder* (1857), 26 L. J. (C. P.) 138; *Smith* v. *Neale* (1857), 26 L. J. (C. P.) 143. It has never been decided whether the covenants for title include a covenant that the assignor has done all things necessary to keep the patents in force, *e.g.* paid renewal fees. Where goods are sold as patented, the invalidity of the patent is no defence to an action for the price. *Todd* v. *O'Regan* (1859), 2 S. XXI. 1320.

(*k*) *Walton* v. *Lavater* (1860), 29 L. J. (C. P.) 275; *Oldham* v. *Longmead* (1789), Davies 157. In *Hocking* v. *Hocking*, 4 R. P. C. 255, KEKEWICH, J., held that the assignor could not dispute validity. In the higher Courts, this point was not seriously argued, but it seemed to be assumed by the Court. See also *Chambers* v. *Crichley* (1864), 33 Beav. 374; *Gonville* v. *Hay*, 21 R. P. C. 49. But such estoppel does not affect a partner of the assignor, at any rate if not a partner at the time of the assignment: *Heugh* v. *Smith* (1877), 25 W. R. 742; *Cropper* v. *Smith*, 1 R. P. C. 81; see also *Axmann* v. *Lund* (1874), 43 L. J. (CH.) 655.

(*l*) *Cropper* v. *Smith*, *supra*.

(*m*) *Bowman* v. *Taylor* (1835), 4 L. J. (K. B.) 58; *Stroughill* v. *Buck* (1850), 19 L. J. (Q. B.) 209.

(*n*) See *Werdeman* v. *Societe Generale d'Electricite* (1881), 19 Ch. D. 246, followed in *Dansk Rekylriffel, etc.* v. *Small*, 25 R. P. C. 421, and the explanation of this case by VAUGHAN WILLIAMS and ROMER, L.JJ., in *Bagot Pneumatic Tyre Coy., Ltd.* v. *Clipper Pneumatic Tyre Coy., Ltd.*, 19 R. P. C. 69. See also *Cox* v. *Bishop* (1857), 8 De G. M. & G. 815.

(*o*) *Smith* v. *Neale* (1857), 26 L. J. (C. P.) 142. The argument in this case turned on whether the contract was to be performed within a year, and the question as to whether patents were "goods" so that a contract for their sale, if of over ten pounds in value, must be in writing, was not raised.

are in existence at the time of the action (*p*). The same would probably hold good for foreign letters patent (*q*). It is doubtful if specific performance can be granted where the patents have not been sealed by compelling the inventor to take the necessary steps for completion (*r*), but failure to take such steps will give ground to an action for damages (*s*).

Agreements as to future patents.

A covenant in an assignment of a patent to assign all future patents relating to the same subject-matter of which the assignor might become possessed is not contrary to public policy, and specific performance of such a covenant will be granted (*t*).

Covenants as to validity.

In agreements for the sale of patents, as in the case of assignments, there is no implied covenant for, or warranty of, validity (*u*), and consequently invalidity cannot be set up as a defence to an action on the agreement, except perhaps if

(*p*) *Printing and Numerical Coy.* v. *Sampson* (1875), L. R. 19 Eq. 462; *Bewley* v. *Hancock* (1855), 6 De G. M. & G. 391; *Liardet* v. *Hammond Electric Light Coy., Ltd.* (1885), 31 W. R. 710.

(*q*) For examples of the exercise of equitable jurisdiction by the English Courts in respect of foreign patents see *Richmond* v. *Wrighton*, 22 R. P. C. 25, and *Worthington Pumping Engine Coy.* v. *Moore*, 20 R. P. C. 41.

(*r*) CHITTY, J., in *Punchard* v. *Dade*, 11 R. P. C. 257, doubted whether an inventor could be compelled to complete. In *Wool, Hide and Skin Syndicate, Ltd.* v. *Riches* (1902), 19 R. P. C. 127, KEKEWICH, J., granted *ex parte* an injunction restraining the inventor from abandoning his application. The case was settled without further proceedings. See also *London and Leicester Hosiery Coy.* v. *Griswold*, 3 R. P. C. 251; *Bewley* v. *Hancock*, *supra*, and *Marx* v. *Galt*, 28 R. P. C. 419.

(*s*) *Lewin* v. *Brown* (1866), 14 W. R. 640.

(*t*) *Printing and Numerical Coy., Ltd.* v. *Sampson* (1875), L. R. 19 Eq. 462; *Bewley* v. *Hancock* (1855), 6 De G. M. & G. 391. But see *Firth* v. *Ridley* (1864), 33 Beav. 516, where specific performance of an agreement to pool all future patents was refused on the ground (*inter alia*) that it was unlimited in time. As to what comes within the term, frequently found in such agreements, "improvement on an invention," see *Linotype and Machinery, Ltd.* v. *Hopkins*, 27 R. P. C. 113, H. L.; *Wilson* v. *Barber*, 5 R. P. C. 675, Ir.; *Valveless Gas Engine Syndicate, Ltd.* v. *Day*, 16 R. P. C. 97, C. A.; *Davies* v. *Davies Patent Boiler Coy., Ltd.*, 25 R. P. C. 823. See also *Davies* v. *Curtis and Harvey*, 20 R. P. C. 561, C. A. In the last case, at p. 572, ROMER, L.J., suggested that to be an "improvement," the new invention must come within the claim of the earlier patent. It would seem doubtful if this is correct, as it would often make the word meaningless, *e.g.* in the provisions for a Patent of Addition, see p. 262. In *King* v. *Oliver*, 1 R. P. C. 23, DENMAN, J., left to the jury the question of whether a later patent was "an extension or modification" of an earlier one. Patents of which the assignor may become "possessed" includes patents he may acquire by purchase (*Printing and Numerical Coy.* v. *Sampson*, *supra*), but not patents in which he merely acquires an equitable interest together with other persons (*Pneumatic Tyre Coy.* v. *Dunlop*, 13 R. P. C. 553).

(*u*) *Smith* v. *Buckingham* (1870), 18 W. R. 314; *Hall* v. *Conder* (1857), 26 L. J. (C. P.) 138; *Smith* v. *Neale* (1851), 26 L. J. (C. P.) 143; *Liardet* v. *Hammond Electric Coy.* (1883), 31 W. R. 710. In *Cutler* v. *Bower* (1848), 17 L. J. (Q. B.) 217, the Court seemed to be of opinion that such a covenant was implied in a covenant for title, but this is inconsistent with the later cases.

the patentee knew that the patent was bad (*x*). It has, however, never been decided whether there is an implied covenant that the vendor will not do any act which would invalidate the letters patent (*y*). Where, however, there is a covenant for validity, or an agreement to assign and give such a covenant, the purchaser may claim damages or set up invalidity as a defence to an action on the contract (*z*).

Rules as to performance.

In many cases part of the purchase consideration is the advance of money to pay fees, etc., in connection with the invention. In such cases it has been held that time is of the essence of the contract (*a*), but that money for the payment of renewal fees need not be advanced till such fees are due (*b*). Where the vendor had agreed to take out a patent and assign a share of such patent, but failed to assign it, it was held that there was a total failure of consideration, the taking out of the patent alone being no consideration (*c*).

Patent Register.

A register of patents is kept at the patent office for the purpose of notifying facts in connection with the ownership of letters patent, and the person registered as the proprietor has absolute power to assign, grant licences, or otherwise deal with the patent, subject to the enforcement in the usual way of any equities and to anything appearing on the register. Such register is *primâ facie* evidence of anything directed to be entered therein (*d*).

(*x*) *Smith* v. *Buckingham, supra.* In this case also, COCKBURN, C.J., suggested that the defendant might plead that the invention patented had only existed in the patentee's imagination.

(*y*) See *Dey* v. *Howard*, 20 R. P. C. 21; see also *Bewley* v. *Hancock, supra.*

(*z*) *Hazlehurst* v. *Rylands*, 9 R. P. C. 1; *Nadel* v. *Martin*, 20 R. P. C. 129, 723; 23 R. P. C. 41, H. L.; *Berchem* v. *Wren*, 21 R. P. C. 683. In the first case part of the purchase money was paid down, the remainder was to be paid immediately the purchaser had satisfied himself as to the validity of the patents; it was held that in order to succeed in his defence he must prove that the patents were in fact invalid, and not merely that he was not satisfied, but that it was sufficient to prove the invalidity of any one of them. See also pp. 244, *et seq.*

(*a*) *Payne* v. *Banner* (1846), 15 L. J. (CH.) 227. In this case a sum was to be paid for the purpose of enabling the patentee to take out foreign patents.

(*b*) *Sequelin* v. *Terrell* (1867), 16 L. T. 537; *Hill* v. *Mount* (1856), 25 L. J. (C. P.) 190.

(*c*) *Hill* v. *Mount, supra.*

(*d*) See p. 286. For examples of the enforcement of equities, see *New Ixion Tyre Coy.* v. *Spilsbury*, 14 R. P. C. 567; *Morey's Patent* (1858), 25 Beav. 581; *cf.* also *Actiengesellschaft für Cartonnägen Industrie* v. *Temler*, 18 R. P. C. 6. There is considerable difficulty in reconciling the rights arising from the legal assignment of the patent with the rights given by Statute to the registered proprietor. If, for example, such registered proprietor executes assignments of the patent to two different persons, or grants exclusive licences to different persons, then it is clear, in spite of the provision that as registered proprietor he can assign or license, one of these assignments or licences must be ineffective. This point has never arisen for decision, but it would seem that the second licence or assignment must, in each case, be invalid unless

It has never been decided by the English Courts how far registration is necessary to complete the title, under the present Act or the Act of 1883, or whether the title when so completed dates back to the assignment (*e*). Effect of registration.

The provisions, however, of the statute seem to be directed rather to simplifying transactions in regard to patents by letting the title start from the registered proprietor, than to making assignment a condition precedent to the enjoyment of the rights given by the patent, and it would therefore seem that registration is not a condition precedent to the right to sue for infringement.

Rights of Co-patentees

The Patent Act provides that where after January 1, 1908, a patent in the ordinary form is granted to two or more persons each shall be entitled (in the absence of any agreement) to use the invention for his own benefit, but not to grant licences without the consent of the other co-patentees (*g*). The rights Rights of co-grantees.

it should be held that where the first assignee or licensee has neglected to register his title for an undue time he is estopped from setting up his title against a later assignee or licensee: *cf. Ex parte Green* (1857), 24 Beav. 145.

(*e*) See *Bowden's Patents Syndicate* v. *Smith*, 21 R. P. C. 438. The only decision under the 1883 Act (which substantially corresponds to the present Act on this point) is the *United Horseshoe Coy.* v. *Stewart & Coy.*, 3 R. P. C. 141, O. H.

In this case the plaintiffs had entered into an agreement for the purchase of a business and certain patents, the assignment and registration of the patents being at a later date. The Lord Ordinary gave damages for the infringement back to the date of the agreement. The Inner House reversed his judgment, finding for other reasons that the damages were only nominal. The House of Lords restored the judgment of the Lord Ordinary but only seem to have considered the grounds of the decision of the Inner House, and the question of the date from which the damages ran does not seem to have been mentioned in argument; see also *Duncan* v. *Lockerbie*, 29 R. P. C. 464. The following decisions on these points were under the Patent Law Amendment Act, 1852 (15 & 16 Vict. c. 83), which differed from the present Act by providing that until registration of the assignee's title, the patentee should be deemed and taken to be the sole proprietor. In *Chollett* v. *Hoffman* (1857), 26 L. J. (Q. B.) 249, the Court decided that registration was necessary before the plaintiff could succeed; but expressly left open the point as to whether or not after registration the title would date back to the assignment. In *Elwood* v. *Christy* (1864–65), 34 L. J. (C. P.) 130, it was decided that registration completed an inchoate title, and that where there had been a series of devolutions it was sufficient if the changes of title were registered after the last assignment. In this case, damages were only given from the date of the completion of the title by registration.

In *Walton* v. *Lavater* (1860), 29 L. J. (C. P.) 275, damages seem to have been given from the date of assignment; see also *Hassall* v. *Wright* (1870), L. R. 10 Eq. 509. In *Ex parte Green* (1857), 24 Beav. 145, the patentee had assigned to A. and subsequently assigned to B., who apparently took without notice, B. registered his assignment first and then A. registered his. On A. moving to rectify the register, B.'s assignment was expunged with costs.

(*g*) Sect. 37. What is meant by a

of co-patentees in patents of earlier date are the same, since these provisions only give the effect of former decisions (*h*). Co-patentees must probably all be joined in an action for infringement either as plaintiffs or defendants (*i*).

Rights of co-owners by devolution.

In the case of a patent vested in several persons holding either jointly or in common, by assignment or operation of law, the position of the co-owners in the above respects is probably the same as those of persons to whom a patent has been jointly granted. Where, however, a patent is divided so that one person has the whole right in a certain separate part of the invention, he can sue alone for infringement of that part and can presumably grant licences (*k*). An assignee for a district is in the position of a sole patentee so far as regards that district (*l*). Where after an infringement has been committed one of two owners of a patent dies, the survivor (whether they hold jointly or in common) can sue alone and recover the whole of the damages (*m*).

Devolution of joint patent rights.

On the death of one of the joint patentees of a patent (granted subsequently to January 1, 1908 (*n*)), the legal interest in the patent passes to the other patentees but the beneficial interest devolves on his personal representatives as part of his personal estate (*p*). Presumably such beneficial interest includes the right to work (*q*), as otherwise it would be of no value unless the patents were worked by licence, since the surviving patentees, although trustees, would not have to account for profits made by their working under the patent (*r*).

patent granted after the commencement of the Act (*i.e.* 1st January, 1908) is not clear. From a comparison with sect. 98 (2), to which this section forms an exception, it would certainly appear that a patent granted after the commencement of the Act means one which was, in fact, issued and sealed after that date. On the other hand, sect. 13 says that "a patent shall be dated and sealed as of the date of application," and for all other purposes the date of application is taken as the date of the grant. This point will need judicial determination.

(*h*) See *Mathers* v. *Green* (1865), 1 Ch. App. 29, and *Steers* v. *Rogers*, 9 R. P. C. 177.

(*i*) This, at any rate, is the invariable practice, and is in conformity with the rule that joint tenants or tenants in common must all be joined in an action for trespass. See, however, *contra* the remarks of Bacon, V.C., in *Sheehan* v. *G.E.R.* (1880), 16 C. D. 59, which seem contrary to the rule followed by the Court in *Smith* v. *L. & N. W. Ry. Coy.* (1853), 2 E. & B. 69.

(*k*) *Dunnicliff* v. *Mallett* (1859), 7 C. B. N. S. 209. In *Anderson* v. *Patent Oxonite Coy.*, 3 R. P. C. 279, the assignee of an undivided share obtained an interim injunction, but this point was not argued.

(*l*) Sect. 14 (1).

(*m*) See *Smith* v. *L. & N. W. Ry. Coy.*, *supra*.

(*n*) See note (*g*), *ante*.

(*p*) Sect. 37.

(*q*) See, however, *Bewley* v. *Hancock* (1860), Johnson 601, when this was treated as an open point.

(*r*) *Steers* v. *Rogers*, 9 R. P. C. 177.

In the case of a patent granted before January 1, 1908, the patentees are joint owners, and on the death of one his interest passes to the survivors (*s*).

The Partition Acts do not apply to Letters Patent, and there is no way for one of several co-patentees to force the sale of the patent or the granting of licences under it. It has, however, always been assumed, on the analogy of the powers of joint tenants of real property, that one of the grantees can assign his share without the consent of the others, and terminate the joint ownership, though the point has never been decided (*t*).

No right of partition but shares may be assigned.

A further point of great difficulty is whether one of several grantees can divide his share, or assign part of it, so as to give several persons independent rights of working under the patent. It is here that the ordinarily accepted analogy to the case of joint tenants of real property is so unsatisfactory. If a tenant has a half share of the profits to be derived from land no injury is done to the other tenant by his dividing such share, since his assignees cannot get in all more than the half of the whole profits (*u*). But in the case of a patent that which the two grantees enjoy is the sole privilege of working a certain invention, and if one of them can divide his share and put two persons in possession of it, it is clear that the share of the other is reduced from one-half to one-third of the monopoly, presuming that all the persons exercise the trade to the same extent. For this reason there seems good ground for thinking that the interests of one of several co-grantees of a patent may belong to that class of interests which by law cannot be divided, such as a *common sauns nombre*, or the right to dig on certain land, since such division would increase the burden on others (*x*).

Can one of several patentees further divide his share?

Persons acquiring an interest in patents by assignment or operation of law can hold either jointly or in common (*y*).

Co-patentees may hold jointly or in common.

(*s*) *National Society for the Distribution of Electricity* v. *Gibbs*, 16 R. P. C. 339. The decision was reversed by the C. A. on another point without any decision on this point.

(*t*) See *per* BYLES, J., in *Dunnicliffe* v. *Mallett* (1859), 7 C. B. N. S. 209.

In this case, however, the only assignment by a part owner, without the consent of the other part owner, was by the defendant himself, who would have been estopped from denying the validity of his own assignment.

In *Manning's Patent*, 20 R. P. C. 74, the title of the person aggrieved arose in this way, but the point was not raised.

(*u*) See 3 & 4 Anne, c. 3, s. 27. Coke on Lytt. 172*a* and 186*a*.

(*x*) *Lord Mountjoy's case*, Coke on Lytt. 164*b*.

(*y*) *Walton* v. *Lavater* (1860), 29 L. J. C. P., at p. 280.

For joint grantees to change their interests so as to hold in common a release under seal would probably be necessary (*z*). The above remarks as to the power of assigning shares in the patent apply equally to persons whose interest has been acquired by assignment or operation of law.

No right to compel amendment surrender or payment of fees.

There is no provision for one co-owner of a patent compelling the others to amend or surrender the patent, or for his obtaining a patent of addition, nor is there any provision for his compelling the others to pay the renewal fees, or for his recovering from them any share of such fees if he pays the whole.

(*z*) Coke on Lytt. 169*a*.

CHAPTER II

NOVELTY AND SUBJECT MATTER

Patents only for new manufactures.

THE Statute of Monopolies declares all Letters Patent invalid except those which are for a new manufacture, and therefore the first question to be considered in investigating the validity of any Letters Patent is whether that which has been patented comes within these words (*a*).

Questions of fact and law.

In this investigation the only question of law is whether or not the subject of the Letters Patent is a manufacture (*b*). The question of novelty, in the sense of whether that which is claimed has been in fact done or described before, is of course a question of fact, and so is the further question of whether it has those qualities which the Courts consider as essential to constitute "a new manufacture" (*c*).

What is a new manufacture?

The further test above referred to is—does the novelty appertain to the manufacture? From the earliest times the Courts have held that a manufacture of a thing new in itself does not necessarily constitute a new manufacture (*d*). It is in many, if not in all cases, the business of a manufacturer to constantly vary his products, and hence it follows that the novelty of the product cannot alone determine whether its production is a new manufacture. Probably the best criterion is whether that which is claimed as a new manufacture lies within the limits of development of some existing trade, in the sense that it is such a development as an ordinary person skilled in

(*a*) 21 Jac. I. c. 3, s. 6.

(*b*) *Walton* v. *Potter* (1841), W. P. C. 597, 601; *Cornish* v. *Keen* (1836), W. P. C. 501, 517.

(*c*) *Losh* v. *Hague* (1838), W. P. C. 200, 205; *Hill* v. *Evans* (1862), 31 L. J. (CH.) 457; *Lyon* v. *Goddard*, 11 R. P. C. 354, H. L.; *Stohwasser* v. *Humphreys*, 18 R. P. C. 116. See *contra Thomson* v. *James* (1863), 32 Beav. 570.

(*d*) *Gadd* v. *Mayor of Manchester*, 9 R. P. C. at p. 524, C. A., and cases there quoted: *Harwood* v. *Great Northern Railway* (1865), 11 H. L. C. 654; *Riekmann* v. *Thierry*, 14 R. P. C. 105, H. L.

that trade could have naturally made, had he wished to (*e*). If so, then, even if the actual thing is new in fact and is a manufacture, it is not a new manufacture but simply a particular instance of an old one.

Examples of this will readily occur to the mind. Take for example a manufacturer of wall papers. It is an essential part of this manufacture to continually produce new patterns. The means by which such new patterns are produced are, generally speaking, old and well known, and therefore it cannot be considered that the mere change in a pattern produced by these old means, although the article produced has never been produced before, is a new manufacture. Such power of change is a necessary part of the knowledge of a competent workman in the particular art. Again, to take a case actually decided in the Courts, a patent was taken out for making tubular boilers, commonly used for heating greenhouses, by casting them in one piece. These boilers were in themselves old but had been made by making the tubes separately and then inserting them in sockets in the connecting rings and fixing with iron cement. It was, however, held that, as the process of casting was well known to the whole world and was applied to the casting of objects of all shapes, and as it was not suggested that there were any special modifications of the ordinary methods necessary for casting this particular object, this was a mere ordinary development of the manufacture of the worker in cast iron, and was not a new manufacture (*f*).

Invention. This further quality which is necessary to constitute subject matter for Letters Patent is often expressed by saying that that which is patented must involve invention, and, in fact, the Statute of Monopolies itself speaks of the patent being granted to the first inventor. It is thought that the best criterion of invention is that given above, but perhaps it may also be expressed by saying that an invention necessarily involves an addition to the stock of public knowledge, that is to say, that the public must be told something which they did not know before.

(*e*) *Place* v. *Blackburn Loom Coy.*, 29 R. P. C. 663, C. A.; *Morgan* v. *Windover*, 7 R. P. C. 131, 446, H. L.; *Tucker* v. *Kaye*, 8 R. P. C. 58, 61; *Muirhead* v. *Commercial Cable Coy.*, 12 R. P. C. 39, 62, C. A.; *Cooper* v. *Baedeker*, 17 R. P. C. 209, C. A.; *British United Shoe Machinery Coy., Ltd.* v. *Claughton*, 23 R. P. C. 321, 335.

(*f*) *Ormson* v. *Clark* (1863), 32 L. J. (C. P.) 8 and 291. *Cf.* also *Dredge* v. *Parnell*, 16 R. P. C. 625, H. L.

Subject-matter a question of fact.

From the criterion suggested above—viz. is the development one which a competent workman in the particular trade could naturally have made had he needed to make it—it is clear that no general rules can be laid down as to what does and what does not constitute invention. What a skilled person could probably have done is a question of fact to be decided on all the evidence which the Court has before it. It has on many occasions been laid down that the questions arising in patent cases are mainly those of fact, and that although in interpreting the Statute of Monopolies regard must be had to the decisions of the last two hundred and ninety years (*g*), yet decisions as to the existence or non-existence of subject matter in particular cases, or dicta on the subject of invention, are not to be regarded as decisions binding on the Court in other cases, but are useful only as showing how the Court has treated various classes of evidence (*h*).

Subject-matter involves three questions.

There are therefore these three questions to be considered in deciding whether the alleged invention forms subject-matter for letters patent. Firstly, is it a manufacture? Secondly, is it new? Thirdly, is it a new manufacture or in other words, does it involve invention? This third question by itself is often referred to as the question of subject-matter.

Manufacture.

A patent can only be granted for a manufacture, and although "manufacture" has been very widely interpreted this restriction is of great importance.

It is extremely difficult to give any satisfactory definition of the word "manufacture," which includes both the process of manufacture and the thing manufactured (*i*). The fact

(*g*) *Plimpton* v. *Malcolmson* (1876), 45 L. J. (CH.), *per* JESSEL, M.R., at p. 506.

(*h*) See *Lister* v. *Norton*, 3 R. P. C., *per* CHITTY, J., at p. 205; *Lyon* v. *Goddard*, 10 R. P. C., *per* BOWEN, L.J., at p. 346; *Savage* v. *Harris*, 13 R. P. C., *per* LOPES, L.J., at p. 370, C. A.; *Riekmann* v. *Thierry*, 14 R. P. C., *per* HALSBURY, L.C., at p. 115, H. L.; *Sandow* v. *Szalay*, 21 R. P. C., *per* BYRNE, J., at p. 39.

(*i*) *R.* v. *Wheeler* (1819), 2 B. & Ald. 345, 349. *Cf.* also *Vorwerk* v. *Evans*, 7 R. P. C. 265, C. A. See also *Boulton & Watt* v. *Bull* (1795), Davies, 208; *Hornblower* v. *Boulton* (1799), Davies, 229. It does not matter that the article is built up *in situ*—*Newall* v. *Elliott* (1863), 10 L. T. (N. S.) 792. In *Higgs* v. *Goodwin* (1858), 27 L. J. (Q. B.) 421, the Court seemed to have doubted whether a process for the purification of water was subject matter for a patent, though they held that its application for treating sewage so as to get a substance useful as manure was. There seems no reason to doubt that a process for water purification would now be held to be a manufacture, *cf.* *Innes* v. *Short*, 15 R. P. C. 449, where the use of zinc powder for preventing corrosion in boilers was held patentable.

that the real value of a patent lies in the prohibition clause shows that that which is sought to be patented must be something which others may be prohibited from doing, and it must therefore be a physical process or thing as apart from a mere discovery. Thus Sir Isaac Newton could not have patented the fact that the earth's attraction varies inversely as the square of the distance from the earth's centre, though he could have patented a spring balance made so as to show the latitude by measuring the earth's attraction (*k*). Perhaps the best attempt at a definition is that of Abbot, C.J.: "But no merely philosophical or abstract principle can answer to the word 'manufacture.' Something of a corporeal and substantial nature, something that can be made by man from the matters subjected to his skill and art or at the least some new mode of employing his art and skill is requisite to satisfy this word" (*l*). Again, it may be said that a patent can only prohibit a manual process and not a process which is merely an exercise of brain power carried out by ordinary manual means—*e.g.* you cannot have a patent for a process of literary or artistic composition, of a method of advertising, or of a scheme for business correspondence. Nor can a patent be granted for an article such as a printed paper for carrying out these processes (*m*). But where a manual process produces any commercial result, or an article is produced which is different from what has been produced before, the difference being not merely a literary or artistic one, the patent would be held to be for a manufacture (*n*). The question of whether a patent was for a manufacture or for an abstract principle was much more frequently discussed in the earlier days than at present, and the result arrived at by the Courts may be said to be that if together with a new principle the patent shows a method of putting it into practice, so that there is something definite to prohibit, this may be good subject-matter (*o*).

(*k*) *Cf. Lyon* v. *Goddard*, 11 R. P. C., *per* HERSCHELL, L.C., at p. 358, H. L.

(*l*) *R.* v. *Wheeler*, *ubi supra*.

(*m*) See p. 255, *n.* (*q*). In *Philpot* v. *Hanbury*, 2 R. P. C. 153, GROVE, J., doubted whether a method of measuring for dressmaking-purposes was a manufacture.

(*n*) *Cf. Cooper's Application*, 19 R. P. C. 53.

(*o*) *E.g.* Watt'sPatent for a use of a separate condenser, to avoid cooling of cylinder, *Boulton & Watt* v. *Bull* (1795), Davies, 162; *Hornblower* v. *Boulton & Watt* (1799), Davies, 221.

Neilson's Patent for heating the air before introduction into furnace, and out of contact with fire, so that its oxygen was not affected. *Neilson's Patent* (1841), W. P. C. 245.

Patent for arranging intermediate

The invention may be in the principle not the means.

Although what is patented must be a manufacture it must be remembered that the merit of the patent, that which removes it so far from the track of previous practice as to constitute it a new invention, need not fulfil this requisite (*p*), thus sheathing ships with a known alloy was held subject matter, though the process of sheathing was carried out in the ordinary way, and the whole merit of the patent was that the inventor had discovered a new property of this alloy (*q*).

Grant cannot extend beyond consideration.

A patent can only be granted for the invention made and disclosed, and "cannot extend beyond the consideration" (*r*), though, of course, it may cover modifications of such invention. A patent therefore which claims something other or wider than the invention disclosed would be bad, quite apart from any question of novelty, as a contravention of the Statute of Monopolies. This objection would have been formerly raised under the plea that the title was too large (*s*), and now would be raised by the corresponding plea that the claim is too large (*t*). Such a plea has been recognised as good, but since the specification and claims are to be read together the claims will be construed as only being for the invention disclosed unless the wording absolutely contradicts this (*u*).

stations on a telegraph so that duplicate signals were given at each. *Electric Telegraph* v. *Brett* (1851), 20 L. J. (C. P.) 123.

Patent for "stratifying" the gases in an explosion engine so that there was a cushion of combustible gas next to piston, and igniting at end furthest from piston, thus getting a more gradual explosion. *Otto* v. *Linford* (1881), 46 L. T. (N. S.) 35. See also *Jupe* v. *Pratt* (1837), W. P. C. 144; *Hadden* v. *Pirie* (1823), 1 S. 1, 423, and cases in next note.

In all of these cases means for carrying out the invention were shown, but these possessed no special novelty. In *Otto* v. *Linford*, *ubi supra*, BRETT, L.J., expressed the opinion that it would have been sufficient had the patentee given the principle only without showing special means. Of course this only applies where a competent workman could supply the means. In *Neilson's Patent*, *ubi supra*, ANDERSON, B., considered that it was necessary to describe some practical means for carrying out the invention.

(*p*) *Hickton's Patent Syndicate* v. *Patents and Machines Improvements Coy., Ltd.*, 26 R. P. C. 339, 345, C. A.; *Place* v. *Blackburn Loom Coy.*, 29 R. P. C. 591.

(*q*) *Muntz* v. *Foster* (1843), 2 W. P. C. 93. *Cf.* also *Lyon* v. *Goddard*, 11 R. P. C. 354, H. L. (use of superheated steam for disinfecting).

(*r*) *Per* ABBOT, C.J., in *Brunton* v. *Hawkes* (1820), 4 B. & Ald. 541.

(*s*) *Derosne* v. *Farie* (1835), W. P. C. 154; *Cochrane* (*Lord* v. *Smethurst* (1811), 1 St. 205.

(*t*) *Moser* v. *Mardsen*, 13 R. P. C. 24, H. L.; *Arnold* v. *Bradbury* (1871), 6 Ch. App. 766; *Edison & Swan Coy.* v. *Holland*, 6 R. P. C. at p. 284. In *Arnold* v. *Bradbury*, *ubi supra*, HATHERLEY, L.C., referred to the American case of *Wyeth* v. *Stone* (1 Story, 273), where the point appears clearly. See also *Unwin* v. *Heath* (1854), 5 H. L. C. *per* POLLOCK, B., at p. 540; *Cassel Gold Extracting Coy.* v. *Cyanide Gold Recovery Syndicate*, 12 R. P. C., p. 256, C. A., and pp. 85 *et seq*.

(*u*) *Edison-Bell Phonograph Corporation* v. *Smith*, 11 R. P. C., at p. 163, and see pp. 115, 116. But *cf.* *British United Shoe Machinery Coy.*,

Danger of wide claims.

In some cases, too, the mere breadth of claim may destroy subject-matter, apart from any question of anticipation, by changing the alleged invention from something which is the result of ingenuity and experiment to a mere attempt to appropriate unexplored ground, or by changing the boundary between the monopoly sought and the former practice so that it is not co-incident with any special advantage (*x*). So, too, if a wide right of variation is claimed for the patented invention, the same rule must be applied to the anticipations (*y*). Again, the absence of proper description may put the patentee in the dilemma that either there is no invention or that he has not described it (*z*).

Claim must not include any old matter.

Nor must the monopoly include anything that is old, and however meritorious the invention the patent will be bad if it transgresses this rule, at any rate until it is limited by disclaimer (*a*).

Validity of grant as a whole must be considered.

The question to be decided is whether the grant as a whole is valid and not whether any particular claim would be valid if it stood alone, and therefore a patent may be bad by reason of want of novelty or subject-matter in a claim which is not alleged to be infringed (*b*).

Ltd. v. *Simon Collier, Ltd.*, 26 R. P. C. 21, where the patent was held bad on this ground.

(*x*) *E.g.* a claim for the use of *any* clamp for holding clothing on cards would be bad though claim for particular clamp good. *Tweedale* v. *Ashworth*, 9 R. P. C. 121—127, H. L.

A claim for setting incandescent mantles by use of any liquid would have been bad (n.b. the judge may have meant bad because not new). *Sunlight Incandescent Coy.* v. *Incandescent Gas Coy.*, 14 R. P. C. 757, 773.

Claim for use for purifying flour of "any oxidising agent except ozone," would be bad but claim for particular oxidising agents good, though these in fact covered all other known gaseous oxidising agents. *Andrews' Patent*, 24 R. P. C. 349, 367, C. A.

Claim for use of mica in tympanum of any sound transmitting instrument would have been bad. *United Telephone Coy.* v. *Harrison* (1882), 21 Ch. D. 720. See also *Rickerby* v. *Duncan*, 25 R. P. C. 248.

(*y*) *Patent Exploitation, Ltd.* v. *American Novelty Coy.*, 22 R. P. C. 316, C. A., and p. 52, *n.* (*f*).

(*z*) *E.g.* Patent for mixing vegetable and mineral oils with no description of process. *Hutchinson* v. *Patullo*, 5 R. P. C., 351, C. A. See Chapter on SUFFICIENCY, p. 100.

Claim for all automatic means of effecting a result previously effected by hand labour held bad. *British United Shoe Machinery Coy.* v. *Simon Collier, Ltd.*, 26 R. P. C. 21, 50.

This point was not considered in the higher Courts.

(*a*) *Kay* v. *Marshall* (1841), 8 C. & F. 245, H. L.; *Minter* v. *Mower* (1835), W. P. C. 140; *Crossthwaite* v. *Moorwood*, 11 R. P. C. 555; *Murchland* v. *Nicholson*, 10 R. P. C. 417; *Kane* v. *Guest*, 16 R. P. C. 433; *Bowden's Patent*, 22 R. P. C. 49; *Nadel* v. *Martin*, 22 R. P. C. 41, H. L.

It may be, however, that in some cases what would be held to be clumsy infringement may not amount to an anticipation. *Cf. Daw* v. *Eley* and other cases, at p 62, *n.* (*o*).

(*b*) *Wilson Brothers, Ltd.* v. *Wilson & Coy.*, 20 R. P. C. 11 H. L.; *Murchland* v. *Nicholson*, 10 R. P. C. 417.

On the other hand, it does not matter how the monopoly is divided between the various claims, if each claim satisfies the necessary criteria, nor can that which is claimed in one claim be used to diminish the subject-matter of other claims (*c*). A claim is not made bad by the fact that it is unnecessarily narrowed, *e.g.* a claim which specifies some new and patentable integer is not invalidated by the fact that it purports to be for such integer in combination with others which are old, even though the alleged combination is not a true combination (*d*). This is because such a claim does not extend the monopoly (*e*).

Novelty and subject-matter.

Although it might seem that the question of novelty and the question of invention are separate, they are usually very closely connected in every patent case, and, in fact, it will not be found that any consistent distinction in terminology has been observed by the Courts between novelty and subject-matter in its restricted sense. It will readily be seen that the distinction is often one without any real difference. In nearly every case the exact thing patented has never been proposed before, and the dispute is usually as to the extent of the advance made on previous knowledge. In such case the question, is the alleged invention new, might be said to be solved by the Court determining what advance on previous knowledge would be necessary in that case to constitute an invention and then deciding if such advance had in fact been made, while the question of subject-matter would be decided by first determining what advance

(*c*) *E.g.* where a new explosive dynamite was claimed by one claim, and the explosion of such dynamite by an old fuse formed the subject of another claim, the patent was held good since the second claim did not extend the monopoly. *British Dynamite Coy.* v. *Krebs* (1879), 13 R. P. C. 190, H. L. See also the judgment of FLETCHER MOULTON, L.J., in *British United Shoe Machinery Coy., Ltd.* v. *Fussell*, 25 R. P. C. 631, 649; *Edison Bell Phonograph Corporation* v. *Smith*, 11 R. P. C. 148, 163, and cases at p. 125, *n.* (*g*).

A different view was expressed by EADY, J., in *Sirdar Rubber Coy.* v. *Wallington*, 22 R. P. C. 257, 266, but the attention of the learned judge was not called to the authorities on this point, and the point was left open by the C. A., 23 R. P. C. 132.

The fact that certain matters are mentioned in the provisional but abandoned in the complete does not prevent the patentee from saying that he invented them, nor can these matters be treated as old and used to diminish the subject-matter of his claims. *Pneumatic Tyre Coy.* v. *East London Rubber Coy.*, 14 R. P. C. 77, 98.

(*d*) See p. 41.

(*e*) *Per* MOULTON, L.J., in *British United Shoe Machinery Coy., Ltd.* v. *Fussell, ubi supra.*; *Edison Bell Phonograph Corporation* v. *Smith, supra.* In *R.* v. *Arkwright* (1785), W. P. C. 64, it was treated as an open question whether if one part of the machine is new the patent should be for the addition or for the whole machine. See also *Boulton & Watt* v. *Bull* (1795), Davies, 162; *Harrison* v. *Anderston Foundry Coy.* (1874), 1 A. C. 574.

had been made and then considering whether such advance were sufficient to constitute invention, and it is usually very doubtful which process has been adopted by the Court (*f*).

Consequently in dealing with subject-matter many decisions which are in form decisions as to novelty will have to be considered (*g*).

Evidence as to invention.

The question of whether a development which has in fact been made was a probable natural development of the art or one which required inventive skill is obviously one of great difficulty, and the relevant evidence is of a very wide nature. Of course the first thing to be ascertained is the state of prior knowledge, in order to ascertain what advance has been made (*h*), and when the exact bounds of the alleged invention have been fixed the question of subject-matter proper is ready for determination.

Sometimes, but rarely, the intrinsic nature of the discovery may be sufficient. Even after the result is known the sense of surprise may still persist in the mind (*e.g.* Edison's discovery that the sensitiveness of the diaphragm of a telephone was immensely increased by firmly clamping it in position instead of mounting it loosely as formerly; or Nobel's discovery that the violently explosive guncotton could be rendered safe by admixture with the still more violent nitroglycerine). But there is no doubt that the general tendency of the mind is to minimise the difficulty of a discovery after it has been made (*k*), and it is often necessary to have recourse to extrinsic evidence to show that what has been done by the patentee was not obvious. One class of such evidence is of supreme importance.

(*f*) See *Gadd* v. *Mayor of Manchester*, 10 R. P. C., *per* LINDLEY, L.J., at p. 525; *Max Muller's Patent*, 24 R. P. C. at p. 479; *Wilson* v. *Wilson Brothers Bobbin Coy., Ltd.*, 28 R. P. C., *per* FLETCHER MOULTON, L.J., at p. 737. See *contra Edison Bell Phonograph Corporation* v. *Smith*, 11 R. P. C., *per* ESHER, M.R., at p. 398.

(*g*) The question of publication is considered separately, see Chapter III.

(*h*) *Beavis* v. *Rylands*, 17 R. P. C., *per* Lord ALVERSTONE, M.R., at p. 710.

In considering subject-matter the Court have to take into consideration all the advantages arising from the invention, and not merely those pointed out in the specification.

Aliter if the advantage only arises from some modification or special method of working the invention not indicated in the specification. *Von der Linde* v. *Brummerstaedt*, 26 R. P. C. 289.

(*k*) "When you consider it you come to the conclusion that it is so easy, so palpable . . . that any fool could do it." *Edison Bell Phonograph Corporation* v. *Smith*, 11 R. P. C. *per* LINDLEY, M.R., at p. 399; *Murray* v. *Clayton* (1872), 7 Ch. App., *per* JAMES, L.J., at p. 583; *Vickers* v. *Siddell*, 7 R. P. C., *per* Lord HERSCHELL, at p. 304, H. L.; *Incandescent Gas Lighting Coy.* v. *De Mare Incandescent System*, 13 R. P. C. 300, 323; *Waterhouse's Patent*, 23 R. P. C., *per* ROMER, L.J., at p. 476, C. A.

If the development be one of great utility, and one which has satisfied a long-felt want in the trade, the inference is almost overwhelming that it required inventive ingenuity or it would have been made before (*l*), that is presuming that there has been no material change in the conditions of the trade, such, for example, as a new demand caused by a change of fashion (*m*).

Another class of evidence which often carries great weight is the fact that the alleged invention was only arrived at by a series of experiments (*n*). It is, of course, not necessary that an inventor should have laboured—the invention may well be the result of a happy thought (*o*), but if the inventor, being equipped with the proper knowledge of his art, has been unable to arrive at the result he has claimed without a series of experiments, the inference is undoubtedly strong that such result was not obvious and constitutes a real addition to public knowledge. This inference may, however, be rebutted, and it must be carefully noted that for the mere fact of experiments to be of much value the inventor must have started with competent knowledge, or he may have been merely rediscovering what was old (*p*).

In some cases evidence may be given to show that the generally received opinion was that success could not be attained by the methods adopted by the inventor (*q*).

Evidence may also be given to explain the nature of the advance made, and the difference of the problem, conditions,

(*l*) *Murray* v. *Clayton* (1872), 7 Ch. App. 570; *Von Heyden* v. *Neudstadt* (1880), 14 Ch. D. 230; *Haslam* v. *Hall*, 5 R. P. C. 1; *Boyd* v. *Horrocks*, 5 R. P. C. 557, 575; *American Braided Wire Coy.* v. *Thompson*, 6 R. P. C. 518, H. L.; *Pirrie* v. *York Street Flax Spinning Coy.*, 11 R. P. C. 429, C. A., Ir.; *British Vacuum Cleaner Coy., Ltd.* v. *Suction Cleaner Coy., Ltd.*, 21 R. P. C. 303, 312; *Taylor* v. *Annand*, 18 R. P. C. 53, 63, H. L.; *Van Berkel* v. *Simpson*, 24 R. P. C. 117, I. H.

But of course there are a number of cases where commercial success has not been held sufficient to establish invention: see *Thierry* v. *Riekmann*, 14 R. P. C. 105, H. L.; *Cooper & Coy.* v. *Baedeker*, 17 R. P. C. 209, C. A.; *Thermos Ltd.* v. *Isola Ltd.*, 27 R. P. C. 288; *Wilson* v. *Wilson Brothers Bobbin Coy., Ltd.*, 28 R. P. C. 733, C. A.

User by the defendant is often appealed to for this purpose, *e.g.* *Deeley* v. *Perkes*, 13 R. P. C. 581, 589, H. L.; *Vickers* v. *Siddell*, 7 R. P. C. 292, 305, H. L.

But as to this see *Clarke* v. *Adie* (1877), 2 A. C. 315, 337.

(*m*) *Gaulard & Gibbs Patent*, 7 R. P. C. 367, 380, H. L.; *King, Brown & Coy.* v. *Anglo-American Brush Corporation*, 9 R. P. C. 313, H. L.; *Gosnell* v. *Bishop*, 5 R. P. C. 151, 158, C. A.; *Savage* v. *Harris*, 13 R. P. C. 364, 374, C. A.

(*n*) *Ehrlich* v. *Ihlee*, 5 R. P. C. 437, 450; *Day* v. *Davis*, 22 R. P. C. 34, 42, and for the converse proposition *Longbottom* v. *Shaw*, 8 R. P. C. at p. 336, H. L.

(*o*) *Cf.* p. 24, *n.* (*t*).

(*p*) *Riekmann* v. *Thierry*, 14 R. P. C., *per* Lord DAVEY at p. 122, H. L.

(*q*) *Cf. British Liquid Air Coy.* v. *British Oxygen Coy., Ltd.*, 25 R. P. C. 601, C. A.

means, etc., in the patentee's invention to those in alleged anticipations.

Processes of invention.

An invention may, and usually does, involve three processes. Firstly, the definition of the problem to be solved or the difficulties to be overcome (*r*); secondly, the choice of the general principle to be applied in solving this problem or overcoming these difficulties (*s*); and thirdly, the choice of the particular means used (*t*). Merit in any one of these stages, or in the whole combined, may support the invention, and it is therefore all important in considering subject-matter to consider, at any rate in the first instance, the whole advance in knowledge due to the inventor, rather than to examine in detail the variations from former practice (*u*).

New articles and new processes.

Although in the following pages the question of patents for new articles and patents for new processes are to some extent treated separately the division is not an exact one, many patents for apparatus being really for their use in new processes, and the subjects necessarily overlap.

Variations in nature and function.

The manufactures forming the subject-matter of Letters Patent have to be considered from two aspects, that of their nature, and that of their function. Their nature is defined by the directions given in the patent as to the manufacture of the article, or the carrying out of the process or system. Their function depends on the use of the article when made, or the results of the process or system. Novelty has to be established in the first respect, but for the purpose of subject-matter both have to be considered, and the second is often the more important.

In the general case it will be found that the directions to the workman are new in the sense that the exact thing proposed has never been done before. Equally generally will it be found that an analysis establishes that the alleged invention can be divided into parts, each of which is old, or resembles what is old, *e.g.* an article is composed of old parts or the various

(*r*) *Fawcett* v. *Homan*, 13 R. P. C., *per* LINDLEY, L.J., at p. 405: "The merit of an inventor very often consists in clearly realising some useful end to be obtained, or, to use Dr. Hopkinson's language in 'apprehending a desideratum.'" See also *Hickton's Patent Syndicate, Ltd.* v. *Patents & Machine Improvement Coy., Ltd.*, 26 R. P. C. 339, C. A.

(*s*) *E.g* *Hayward* v. *Hamilton* (1881), Griff. 115, C. A.

(*t*) All these stages need not exist separately. Sometimes the discovery of the result and the means are simultaneous, *e.g.* discovery of water tabbies referred to in *Liardet* v. *Johnson* (1778), W. P. C. 53.

(*u*) *Annand* v. *Taylor*, 18 R. P. C. 53, 63, H. L.; *Bray* v. *Gardiner*, 4 R. P. C. 400, 404.

steps of a process have been applied to the same or other substances. While, therefore, the question for the Court is whether there is invention in the alleged new manufacture as a whole, it is often necessary to consider how far the individual parts are novel, but it must be remembered that variations in the function of a part, considered apart from the rest of the invention, may be variations in the nature of the article or process as a whole. This variation of function leads to the question of analogous user.

There are various classes of new user. Thus a claim may be made for the use of an article as a whole for a new purpose, or for the application of a process to a new substance, or an old article may be embodied as a part of some other article. The considerations affecting such new users are probably best expressed in the words of Lord Chelmsford in *Penn* v. *Bibby*— New users.

"In every case of this description the main consideration seems to be whether the new application lies so far 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" (*x*).

The ingenuity of the application may lie in grasping the fact that the old means will deal with the problem to be overcome, or in adapting the old means so as to overcome the special difficulties (*y*) which occur in the particular case. In the first case it is usually necessary that it should not have been known that the new and old problems were identical (*z*), which is generally expressed by saying that the user must not be "merely analogous." The merit of the invention may lie in the determination of the real nature of the difficulties to be overcome (*a*), but if these were known then ingenuity must be shown either in the choice of a method for overcoming these difficulties or in the means for carrying such method out, but it is not necessary that the means should be new in themselves (*b*).

(*x*) 1866, 2 Ch. App. at p. 136. *Cf.* *Acetylene Illuminating Coy., Ltd.* v. *United Alkali Coy., Ltd.*, 22 R. P. C. 145, 155, H. L.

(*y*) *Hayward* v. *Hamilton* (1881), Griff. 115, 116; *British Liquid Air Coy., Ltd.* v. *British Oxygen Coy., Ltd.*, 25 R. P. C. at p. 601, C. A., where the fact that scientific opinion thought the method impossible was held evidence against analogy. *Hickton's Patent Syndicate* v. *Patents & Machine Improvements Coy.*, 26 R. P. C. 339, 247, C. A. And see cases in note (*b*), *infra*.

(*z*) *Steiner* v. *Heald* (1851), 20 L. J. (EX.) 410.

(*a*) See p. 24, *n.* (*r*).

(*b*) *Cannington* v. *Nuttall* (1871), L. R. 5 H. L. 205; *Hickton's Patent Syndicate* v. *Patents & Machine Improvement Coy., Ltd.*, 26 R. P. C.

Non-analogous users.

Where the new user is such as to involve fresh difficulties for which the remedy is not too obvious, the old user is not

339, C. A.; *Dangerfield* v. *Jones* (1865), 13 L. T. 142; *Lawrence* v. *Perry*, 2 R. P. C. 179; *Gadd* v. *Mayor of Manchester*, 9 R. P. C. 566, C. A.; *Kinmond* v. *Keay*, 20 R. P. C. 497, I. H.; *Reason Manufacturing Coy.* v. *Moy*, 19 R. P. C. 409.

See also as to the application of old means to get over special defects in complicated machines, *Edison Bell Phonograph Corporation, Ltd.* v. *Smith*, 11 R. P. C., *per* ESHER, M.R., at p. 398. But *cf. British United Shoe Machinery Coy.* v. *Claughton*, 23 R. P. C. 333.

Among cases of this class are the following:—

Use of perforated disc in place of band for musical boxes in which levers were actuated by air pressure held good subject-matter, though both these means had been used for Jacquard machines in which, however, the movement had been step by step and not continuous. Also the suggestion for the use of a disc in a musical box without levers held not to anticipate. *Ehrlich* v. *Ihlee*, 5 R. P. C. 437, C. A.

Use of three wires on the principle of the trussed frame for forming a support for cycle saddles held good. *Brookes* v. *Lamplugh*, 15 R. P. C. 33, C. A.

Use of soft metal confined within hard metal rims for bearing of rotating shafts and as guides for piston rods. It had been previously used for packing pistons, but while in previous user object was to produce pressure in order to avoid leakage, the object of present user was to avoid pressure. *Newton* v. *Vaucher* (185[illegible] 21 L. J. (EX.) 305.

Doubling over edge of ring before forcing on to bobbin so that it would enter wood held to be subject-matter, although edges of biscuit tins had been doubled over. (So held by a majority of the judges. Patent held bad for non-utility.) *Wilson* v. *Wilson*, 18 R. P. C. 139, C. A.

Adapting the method of propulsion formerly used in bicycles to tricycles would be subject-matter if new. *Brereton* v. *Richardson*, 1 R. P. C. 165. (This would seem a most doubtful decision; *cf. Nadel* v. *Martin*, *infra*.)

Use of spring jaws for sliding pencil case. Similar jaws had been used for watch keys. (Patent held bad on other grounds.) *Lawrence* v. *Perry*, 2 R. P. C. 179, 187.

Use of two hinged lids for electrical fuse boxes so arranged that both could not be opened at once. Similar interfering doors had been used in compression apparatus for the same purpose. (The C. A. seemed to doubt subject-matter, but reversed the decision on other grounds.) *Reason Manufacturing Coy., Ltd.* v. *Moy*, 19 R. P. C. 409; 20 R. P. C. 205, C. A.

Fixing brackets in ploughs in H girder beams, thereby preventing shearing, although brackets had been fixed in such beams in house construction. *International Harvester Coy. of America* v. *Peacock*, 25 R. P. C. 765, P. C.

Adaptation of a number of old devices to use on phonograph held to form subject-matter. *Edison Bell Phonograph Corporation* v. *Smith*, 11 R. P. C. 389, C. A.

Use of iron plates, old in themselves, in building houses so as to render them fireproof is good subject-matter. *Boulton & Watt* v. *Bull* (1795), Davies, *per* EYRE, J., at p. 209 (obiter).

The use in a dobby loom of a certain arrangement of cams and levers for actuating shuttle change mechanism good subject-matter, though the arrangement would not be subject-matter claimed apart from the loom as a separate tool. *Hattersley* v. *Hodgson*, 23 R. P. C. 192, H. L.

Making putties of material cut with a curve to get a better fit. Cutting a material with a curve for this purpose was old in dressmaking, etc., and had been proposed for leather leggings. *Fox* v. *Astrachans, Ltd.*, 27 R. P. C. 377.

Use of mandril heated internally for bending sawn wood not analogous to use of solid mandril for bending roots, etc., to make walking sticks, heat being applied externally. *Dangerfield* v. *Jones* (1865), 13 L. T. 142.

Use in a machine for separating chaff from dust of a cone in which air formed a vortex, the air and dust escaping at a hole at the top, and the chaff from a hole at the bottom. A fan was used to produce suction and air entered at the bottom. A former machine for separating air from dust

usually considered analogous (*c*). So, too, where the new user makes use of properties or advantages which were not apparent or useful in the old user (*d*) it may form subject-matter.

had a similar cone, but there was only one small hole at the bottom for escape of dust and no suction fan, as the entry of additional air would have defeated object of machine. *Sutcliffe* v. *Abbott*, 20 R. P. C. 50.

Patent for "Stepney" auxiliary wheel with pneumatic tyre and devices for fastening it to the rim of a wheel with deflated tyre. Held not analogous to the use of additional wheels affixed to hub, or to extension pieces used for broadening rim. *Stepney Spare Motor Wheel Coy., Ltd.* v *Hall*, 28 R. P. C. 381.

Use of inextensible wires for holding on a tyre held not to be anticipated by the use of spring wires in the edges of a tyre. The patentees' wires acted by their inextensibility and the tyre would have come off had one been cut; in the alleged anticipation the wires acted by pressure on the rubber and the tyre would have remained on had one been cut. *Pneumatic Tyre Coy., Ltd.* v. *Casswell*, 13 R. P. C. 375, C. A.; *Same* v. *Ixion Patent Pneumatic Tyre Coy., Ltd.*, 14 R. P. C. 853; *Same* v. *East London Rubber Coy.*, 14 R. P. C. 573, C. A.; *Same* v. *Leicester Pneumatic Tyre Coy.*, 15 R. P. C. 159.

Patent for detachable tyre held on to rim by projections fitting into dovetail grooves, an inner air tube forcing them in, not anticipated by solid rubber tyres sprung into grooves, or by tyres in which outer cover was cemented either to rim or to air-tube, since the projections were not held into the grooves by air pressure. *North British Rubber Coy.* v. *Gormully & Jfferey Manufacturing Coy.*, 15 R. P. C. 245, H. L.; *Same* v. *Macintosh*, 11 R. P. C. 477.

Making a compass bowl double, and placing in the outer bowl viscous liquid which by its friction checked the motion of the bowl containing it. It had been formerly proposed to use viscous liquid to float the compass bowl. *Thomson* v. *Batty*, 6 R. P. C. 84.

(*c*) Among cases of this class are the following:—

Use of wood in bearings for screw propellers so arranged that water could flow freely within bearings to cool them. Wood had formerly been used in bearings of grindstones and waterwheels, but the rate of revolution was very much less, and cooling arrangements were unnecessary. *Penn* v. *Bibby* (1866), 2 Ch. App. 127.

Use of principle of rectifier, as used in Coffey's Patent still for separation of two liquids, for separation of oxygen and nitrogen. *British Liquid Air Coy., Ltd.* v. *British Oxygen Coy., Ltd.*, 26 R. P. C. 509, H. L.

Use of a special arrangement for heating glass in a tank the walls of which were air cooled. Air cooling was very old, but the new user involved fresh difficulties. *Cannington* v. *Nuttall* (1871), L. R. 2 H L. 205.

Use of wheels gearing into racks for raising and lowering gasometer, in place of ordinary arrangement of pulleys over supports. Practically the same means had been used for floating docks, but these never rose above the level of the supports. *Gadd* v. *Mayor of Manchester*, 9 R. P. C. 516, C. A.

Use of two cylinders in register (as in web printing) for printing on detached pieces of uneven thickness such as sacks, which were fed in at the proper periods, the cylinders being so mounted as to deal with the uneven thickness. (Patent was held bad for insufficiency.) *Kinmond* v. *Keay*, 20 R. P. C. 497, I. H.

The use, for cold pressing of nuts, of a female tool having a shallow recess into which the metal might expand so as to avoid the risk of the blank splitting or bulging, held not anticipated by the user of recesses to hold thin articles such as washers where there was no risk of splitting or bulging and the recess was only used centrally. *Fellows* v. *Brookes*, 27 R. P. C. 101.

Use of centring devices for a ship's telegraph where the problem was "substantially different" to those met with in their former use. *Chadburn* v. *Mechan*, 12 R. P. C. 120.

Adapting principles of above ground conveyers to underground conveyers. *Blackett* v. *Dickson & Mann, Ltd.*, 26 R. P. C. 73, O. H.

(*d*) Among cases of this class are the following:—

Use of thin flexible paper tubes for

Object to be considered.

In considering whether the user is analogous, attention must be paid not only to the effect of the means employed, but

the wet spinning of flax held good in spite of fact that they had been used for dry spinning. The special advantage for wet spinning was that in drying the paper tube adhered to, and expanded with, the flax, and so parted from the bobbin, while tangling, etc., of flax was prevented. In the previous use in dry spinning the tube never parted from bobbin. *Pirrie* v. *York Street Flax Spinning Coy.*, 11 R. P. C. 429, C. A. Ir.

Use of a particular alloy of copper and zinc for sheathing ships held good though such alloy had been used for other purposes. The particular advantage for sheathing purposes was that while preventing excessive rust it allowed enough to keep barnacles from adhering. This property had not been recognised or utilised in the previous user. *Muntz* v. *Foster* (1844), 2 W. P. C. 93.

Use of dilute cyanide solution for extracting gold from ores not anticipated by use of strong solutions, since the dilute solution exercised a selective action which the strong did not. (Patent held bad on other grounds.) *Cassel Gold Extracting Coy., Ltd.* v. *Cyanide Gold Recovery Syndicate*, 12 R. P. C. 303, C. A.

Heating air out of contact with fire, so that oxygen was unaffected, not anticipated by heating air in contact with fire for purpose of creating a draught. *Neilson's Patent* (1841), 1 W. P. C. 295.

Use of mohair and silk together for pile fabrics (which gave effect of animal skins) not anticipated by their use separately for pile fabrics, or their use together for glacé goods. (Patent held bad on other grounds.) *Lister* v. *Norton*, 3 R. P. C. 199.

Use of farina on waterproof fabrics, which were afterwards printed in colours, not anticipated by its use without printing, since it was found to have a special power of absorbing colouring matter which could not have been foretold. *Moseley* v. *Victoria Rubber Coy.*, 4 R. P. C. 241.

Use of springs to support an incandescent burner with a flexible connecting pipe for the purpose of avoiding vibration. Ordinary gas burners had been mounted on springs, and both classes had had flexible connecting pipes attached for portability. *Anti-Vibration Incandescent Lighting Coy., Ltd.* v. *Crossley*, 22 R. P. C. 157.

Use of retort inclined at such an angle that while the coal could be automatically charged, and the coke similarly discharged, the coal arranged itself on top in an even layer, and thus prevented gas from having to pass through glowing coal. The use of inclined retorts had been suggested for purifying animal charcoal, but in this case there was no need for top layer to be even. Inclined retorts had also been suggested for cases where coal was charged in by a continuous process, but with such a process it would have been impossible to attain result achieved by new invention. *Automatic Coal Gas Retort Coy.* v. *Mayor of Salford*, 14 R. P. C. 450.

Where the patentee had shown how to make transmitters and receivers for wireless telegraphy which had certain advantages for whose production "loose" coupling was necessary, all prior specifications involving "tight" coupling, which would not give these advantages, were put aside as irrelevant. *Marconi* v. *British Radio Telegraph Coy., Ltd.*, 28 R. P. C. 181.

Use of a closely wound carbon filament for the purpose of diminishing the radiant surface in incandescent lamps not analogous to use of widely wound spirals in arc lamps, the winding not being for the same object or producing the same effect. *Edison & Swan Coy.* v. *Woodhouse*, 4 R. P. C. 79, C. A.

Patent for forming non-porous carbons by placing carbon in an atmosphere of hydrocarbon gas, heating by passing current and gradually increasing such current. The amount of deposition increased with the temperature and thus the inequalities in size were automatically corrected, since at the places of smaller section there was increased resistance and consequently higher temperature. The increase of current kept up the temperature and was necessary for success. *Held*, not anticipated by a process of deposition by means of external heating which would not have given the automatic correction, or by experiments in the fusion of carbon in which

also of the object for which they were used. If the results or some of them sought to be attained by the new user; although in

a current was passed through it, and it was noted that the carbon became denser, but the process employed did not include increasing the current, and would not have given the patentee's result. *Edison* v. *Woodhouse*, 4 R. P. C. 99, 106, C. A.

Use of prisms in pavement lights which both refracted and reflected not anticipated by use of prisms refracting only in cabin lights. *Hayward* v. *Hamilton* (1881), Griff. 115, C. A.

Wire mattresses having in the centre a wire network and at each end springs pointing from centre to side, so that the middle portion of the mattress received the greatest amount of support. *Held*, not to be anticipated by mattresses in which some springs were shown arranged straight, and some slightly diagonal, no stress being laid on this latter form, or by a specification showing inclined springs pointing alternately in different directions, since neither of these arrangements achieved the patentee's object. *Evans* v. *Hoskins*, 24 R. P. C. 517, C. A.

Use of thorium and 1 per cent. cerium in mantles, which combination gave a maximum illuminating effect. *Held*, patentable although thorium had been used before, and as appeared at trial such thorium had contained 0·05 per cent. cerium, but the presence of the cerium was not known, nor did it give the patentee's effect. *Welsbach Incandescent Gas Light Coy., Ltd.* v. *McGrady*, 18 R. P. C. 513.

Use of indiarubber for card fillets in place of leather, the advantage being that it was much more elastic. *Held*, not anticipated by its use to form part of an artificial leather, the object being in this case to get a comparatively non-elastic substance. The jury were directed that the question was, had this article the qualities and properties sought by the patentee. In a later case the patent was held bad on proof that a statement had been published that this artificial leather had in fact been used for card fillets, but proceedings were then compromised after a rule *nisi* had been granted for a new trial. *Walton* v. *Potter* (1841), W. P. C. 585.

A process for welding iron rails by the use of aluminium which reduced iron oxides, and in which the melted iron was run on to the rails so as to strengthen the joint, not anticipated by a former patent for welding by means of the heat caused by aluminium reducing other oxides, but in which the metal was kept away from rails. *Thermit Ltd.* v. *Weldite Ltd.*, 24 R. P. C. 441.

Use of blocks for closing round boilers, made so as to pivot, not anticipated by use of blocks which might possibly have pivoted, but which were used with a backing of earth so that they could not move. *Poulton* v. *Adjustable Cover and Boiler Block Coy.*, 22 R. P. C. 690.

Patent for the "three wire system" in which lamps were arranged in parallel between each of the main conductors and a third wire connected between two dynamos running in series. *Held* good though a similar arrangement had been used with lamps in parallel with a third wire not connected to the dynamos, and a third wire connected to the dynamos had been used with lamps arranged in series. In neither of these cases had the patentee's object of saving copper been attained. *Hopkinson* v. *St. James's Electric Lighting Coy., Ltd.*, 10 R. P. C. 46.

Patent for equalising amount of thread used from different bobbins of a lace machine by traversing bar so that each in turn did net and pattern parts. Formerly bobbins had been changed by hand. Traversing was used in other branches of lace making, but did not achieve purpose of equalising user of thread. *Hickton's Patent Syndicate* v. *Patents & Machines Improvement Coy.*, 26 R. P. C. 339, C. A.

Patent for dumb-bells which were divided down the middle, the two halves having a spring between them so that the effect of the exercises was increased by the muscles being kept in a state of tension in order to maintain the grip. *Held*, not anticipated by handgrip machines, not properly adapted for use as dumb-bells, and therefore not similarly affecting the muscles. *Sandow* v. *Szalay*, 23 R. P. C. 6, H. L.

Patent for device for varying the extent of opening of exhaust valve

fact produced by the old user, were merely accidental and unimportant consequences, this considerably diminishes the effect of such prior user in destroying subject-matter (*e*).

Analogous users.

On the other hand the Courts have fully realised the importance of manufacturers not being prevented from continually developing their methods, and availing themselves of the great store of knowledge which has been accumulated as to useful appliances in their own and in other trades (*f*), and therefore it has been held that the substitution of parts or substances which have been recognised as equivalents does not constitute subject-matter unless such new use results in

in motor without affecting point of stroke where such opening commenced, not anticipated by device where such point varied. *De Dion Bouton, Ltd.* v. *Muskett*, 26 R. P. C. 404.

Patent for lamp with floating feed and horizontal carbons held good, though horizontal carbons not new, and there had been lamps with floating feeds and vertical carbons, in which there was the disadvantage that the feed was affected by the loss of weight in the carbons. *British Westinghouse Coy.* v. *Braulik*, 27 R. P. C. 224, C. A.

Use of a filter press for producing a wet "slip," which was not ready for use and which had to be treated again, no anticipation of use of a filter press so as to produce a slip, dry enough to be ready for use, and which had special quick setting properties. *Adamant Stone Coy.* v. *Liverpool Corporation*, 14 R. P. C. 11.

Patent for making belts by impregnating canvas with dissolved gutta percha and evaporating off solvent, not anticipated by specification which spoke of use of heated gutta percha, but did not mention solvent or evaporation. *Dick* v. *Tullis*, 13 R. P. C. 149.

In a telescopic ladder in which upper part was raised by rope passing over a pulley on the lower part, levers were provided on the lower part which by *their own weight* fell under each step of the upper part when it passed them. These levers were all raised by a rod for the ladder to be lowered. *Held*, not anticipated by a ladder in which levers were worked by spring pawls which had to be compressed by hand or otherwise to lower ladder, or by a ladder in which the weight of the upper part was wholly supported by a chain attached to a hook. *Kelly* v. *Heathman*, 7 R. P. C. 343.

(*e*) See *Automatic Coal Gas Retort Coy.* v. *Mayor of Salford*, p. 28, *n.* (*d.*); *Anti-Vibration Incandescent Lighting Coy.* v. *Crossley*, *ibid.*; *Welsbach Incandescent Gas Light Coy., Ltd.* v. *McGrady*, *ibid.*; *Evans* v. *Hoskins*, *ibid.* See also *Harwood* v. *G. N. Ry. Coy.* (1850), 29 L. J. (Q. B.), *per* BLACKBURN, J., at p. 202.

Where a patentee claimed the use of nitrogen peroxide for conditioning flour, and an earlier specification had claimed the use of ozone, and it was shown that ozone had in fact no effect, and that any results got by the earlier inventor were due to small quantities of nitrogen peroxide produced as an impurity by his process, it was held that this was no publication of the use of nitrogen peroxide. *Flour Oxidising Coy.* v. *Carr*, 25 R. P. C. 428; *Same* v. *Hutchinson*, 26 R. P. C. 597. See also p. 68.

(*f*) *Gadd* v. *Mayor of Manchester*, 9 R. P. C. 516, C. A.; *Sideley* v. *London Hygienic Coy.*, 14 R. P. C. 514; *Wood* v. *Raphael*, 13 R. P. C. 730, 735; *Dredge* v. *Parnell*, 16 R. P. C. 625, H. L.; *Donnersmarck hutte, &c.* v. *Electric Construction Coy.*, 27 R. P. C. 774, 779, 783, C. A.

The fact that workers in a particular trade are ignorant of devices used in other trades is not necessarily sufficient to make the use of such devices in that trade patentable. Cf. *Shaw* v. *Barton*, 12 R. P. C. 282, 291; *Nadel* v. *Martin*, 20 R. P. C. 723, 743, C. A.; *Patent Bottle Envelope Coy.* v. *Seymour* (1858), 28 L. J. (Q. B.) 22.

some unexpected advantage. Again, the use of an old device in an analogous manner and for an analogous purpose is not subject-matter (*g*). Of course it is a question of fact whether any user comes within this definition, but a number of decisions fall within a few principal classes.

Alternative methods.

A class of user in which the presumption for analogy is very strong is where methods A and B, having been employed in dealing with some articles or in some trades, and method A only for other articles or in other trades, it is proposed to patent the use of method B in relation to such last-mentioned articles or trades. The fact of method B having been used under circumstances where A could also be used is looked on as very strong evidence of the user being analogous (*h*).

(*g*) *Gadd* v. *Mayor of Manchester*, *supra*; *British Ore Concentration Coy.* v. *Minerals Separation Syndicate*, 27 R. P. C. 33, H. L.; *Waterhouse's Patent*, 23 R. P. C. 470, C. A.; *Kay* v. *Marshall* (1839), 2 W. P. C. 74; *Patent Bottle Envelope Coy.* v. *Seymour*, *supra*; but *cf. Dangerfield* v. *Jones* (1865), 13 L. T. 142.

(*h*) There were two types of piano damper in general use, Broadwood's and Collard's. Broadwood's had been centred either in the body or in a separate arm, Collard's only in the body. *Held*, that centring Collard's on a separate arm was not patentable. *Herburger Schwander et Cie.* v. *Squire*, 6 R. P. C. 194, C. A.

The substitution of a sear, as commonly used in hammer actions, for another form of detent in a special, but previously patented, ejector mechanism. *Westley Richards & Coy.* v. *Perkes*, 10 R. P. C. 181. See also *Deeley's Patent*, 12 R. P. C. 192, C. A.

Substitution of an old longitudinal folder for old chopper folder between two printing machines. *Northern Press & Engineering Coy., Ltd.* v. *Hoe*, 23 R. P. C. 613, C. A.

Substitution of top for bottom driving in a double screen stone breaking machine, both top and bottom driving having been used in a single screen machine. *Baxter* v. *Mardsen*, 22 R. P. C. 18.

Putting transformers in parallel, many electrical machines having been arranged either in parallel or series, and transformers having been used in series. *Rucker* v. *London Electric Supply Corporation, Ltd.*, 17 R. P. C. 279.

Use of one of several well-known forms of candle holding device attached directly to base of candlestick, as other forms had been. *Carter* v. *Leyson*, 19 R. P. C. 473, C. A.

Use of iron tubes covered with copper in tubular boilers, such tubes having been used for other purposes as alternatives to iron tubes. *R.* v. *Cutler* (1847), 3 Car. & Kir. 215.

Use of a form of spring previously used for front spring of a carriage as a back spring. *Morgan* v. *Windover*, 7 R. P. C. 131, H. L.

Substitution of free top spinning in bowl for fixed top for working mechanical figures, both kinds of tops having been used in other forms of this class of toy. *Cole* v. *Saqui*, 6 R. P. C. 41, C. A.

Use of a particular device formerly used for adjusting toe piece of cycle pedal for adjusting side piece, other devices for the adjustment of the toe piece having been used previously for adjusting the side piece also. *Waterson* v. *Lloyd's Cycle Fittings, Ltd.*, 16 R. P. C. 277.

Use for protecting tyres of leather prepared in a particular known way, leather prepared in other ways having been used for this purpose. *Brassington* v. *Cox*, 15 R. P. C. 502.

Both sheet metal and leather had been embossed between male and female dies. Leather had also been embossed by hammering it on a soft substance. The use of this last process for sheet metal not patentable. *Embossed Metal Plate Company* v. *Saupe*, 8 R. P. C. 355.

Substitution of pivoted for fixed placquets in eye-glasses with a fixed

Self-contained units.

Similar cases are those in which what may be called self-contained units of machinery, or processes fulfilling a function complete in itself, are transferred from one trade to another or to a different purpose in the same trade. If these units act in the old way, and achieve in their new environment a result not new in itself, the transfer has generally been held not to constitute subject-matter (*i*).

bridge, both kinds having been used in glasses with spring bridges. *Wood* v. *Raphael*, 14 R. P. C. 496, C. A.

Oil spray lamps were of two classes, in one of which steam was used to spray the oil, in the other oil alone was used. In some of the lamps of the latter class the vapour of the oil had been taken to the reservoir to neutralise the back pressure. The use of steam in the first class of lamps for this purpose held not patentable. *Rose's Patents Coy., Ltd.* v. *Braby*, 11 R. P. C. 198, I. H.

Use for holding pile fabrics of strips of metal with hooks cast on them (the hooks being in plane of strip), which strips were attached to rollers, instead of separate hooks being attached as formerly, held not patentable in view of separate hooks, and strips with hooks on them having both been used for holding articles (though in this case the hooks were a right angles to plane of strip). *Longbottom* v. *Shaw*, 8 R. P. C. 333, H. L.

Both revolving and fixed rubber heels were known and constructed ordinarily in the same way. A patent for making revolving heels with metal plate pierced so that rubber on both sides was in contact, held bad in view of this having been proposed for fixed heels. *Hickson* v. *Redfern*, 22 R. P. C. 307.

Clinker and granite had been both used for making certain kinds of artificial stone. A patent for the substitution of clinker for granite in a special process for making such stone held bad. *Adamant Stone Coy.* v. *Liverpool Corporation*, 14 R. P. C. 11. See also *Horton* v. *Mabon* (1862), L. J. (C. B.) 255.

(*i*) Use in a mowing machine of a device for making the blades revolve at a variable speed, which device had previously been used in a hay-making machine. *Bamlett* v. *Picksley* (1875), Griff. 40.

Use in a machine for tearing shoddy of rollers revolving at different speeds, in order to accumulate material between them, as had been done in cotton machinery. *Tatham* v. *Dania* (1869), Griff. 213.

Use of ordinary clockwork mechanism for actuating top. *Britain* v. *Hirsch*, 5 R. P. C. 226, C. A.

Use of double groove to get over dead point in embroidering machinery, this device having been proposed for the same purpose for cycles. *Nadel* v. *Martin*, 22 R. P. C. 41, H. L.

Use in waste water preventer of special method of relieving air pressure already used in another type of such preventers. *Humpherson* v. *Syer*, 4 R. P. C. 407, C. A.

Use of bicycle pump in place of bellows in vacuum cleaning machine. *Bimm* v. *Shoppee*, 28 R. P. C. 274, C. A.

Use in lace machine of method of construction, common in other machines, for securing rigidity. *Cropper* v. *Smith*, 1 R. P. C. 81, 88, 90, C. A.

Use for bottle stopper of a sphere pierced with a hole, rotatable so that liquid could escape, the same device having been used for tea urns. *Hazlehurst* v. *Rylands*, 9 R. P. C. 1.

Use of joint in upper bar of collapsible bicycle luggage carriers, a joint having been similarly used for collapsible seats. *Main* v. *Ashby & Coy.*, 28 R. P. C. 492. See also *Baker* v. *Kinnell*, 9 R. P. C. 441.

Use for belts of a guard formerly applied to cogwheels. *Leadbeater* v. *Kitchen*, 7 R. P. C. 235, C. A.

Use of cramps, as used to hold belts, to stretch leather on rollers. *Oddy* v. *Smith*, 5 R. P. C. 503.

Use of particular method of joining ends of wires for securing bicycle tyres, which method had been used for securing ends of wires in cotton and other machinery. *Shaw* v. *Barton*, 12 R. P. C. 282.

Use of old method of applying and forming metal for forming compound

Another class of cases in which the presumption that the previous user was analogous is very strong is where there has merely been a duplication of an existing part without any alteration in the function or mode of action (*k*). A similar principle applies where the use of a mode of construction or action is extended without a new purpose being achieved (*l*). Duplication.

Again, patents for making in one articles previously made in two or more pieces have generally been held invalid (*m*), Consolidation or division.

conductors with square ends. *Glover* v. *American Wire Coy.*, 19 R. P. C. 102.

Use of canvas for making joint between "Sykes" pipes, this method being old for other pipes and there being no difficulty in applying it to "Sykes" pipes. *Doulton & Coy., Ltd.* v. *Albion & Clay Coy., Ltd.*, 28 R. P. C. 638, C. A.

Use of a process for making hair nets which had been used for making tulle. *Marsh* v. *Wolff*, 23 R. P. C. 265.

Use for shaping filaments during sintering of method formerly used for shaping them after sintering. *Osram Lamp Works* v. *Z Electric Lamp Coy.*, 29 R. P. C. 429.

Use of distillation *in vacuo* at a particular stage of process for making acetic acid, distillation *in vacuo* having been formerly used at other stages in this process, and the only gain in either case being a saving of fuel. *Von der Linde* v. *Brummerstaedt*, 26 R. P. C. 289.

Use of chloroform for crystallising acetyl-salicylic acid, it being a well-known reagent for crystallising other organic bodies. *Farbenfabriken, &c.* v. *Chemische Fabrik von Heyden*, 22 R. P. C. 501.

Claim for mixing thickened vegetable oils (old in themselves) with mineral oils. *Hutchinson* v. *Pattulo*, 5 R. P. C. 351, I. H.

Use of coloured varnishes for decorating tinplate made in a special, but old manner, although a new artistic effect was obtained. *Hudson & Scott & Sons, Ltd.* v. *Barringer*, 23 R. P. C. 502, C. A. See also *Harrison* v. *Nicholson*, 25 R. P. C. 398.

(*k*) The following are cases of this class where the patents have been held void:—

Use of two fans instead of one for actuating imitation flames on stage. *Fuller* v. *Handy*, 21 R. P. C. 6.

Use of springs at each end of shuttle carrier in place of one spring and a leather buffer. *Deutsche Nahmaschinen Fabrik* v. *Pfaff*, 7 R. P. C. 251, C. A.

Doubling rollers so that two tinplates might be dipped at a time instead of one. *Elias* v. *Grovesend Tinplate Coy.*, 7 R. P. C. 455.

Making a thin razor blade with two edges. *Gillett Safety Razor Coy.* v. *Gamage*, 26 R. P. C. 745.

Duplicating cylinders in refrigerating machine. *Haslam* v. *Hall*, 5 R. P. C. 1.

Making crape falls with fold on both sides instead of one only. *White* v. *Toms* (1867), 37 L. J. (CH.) 204. But see *British United Shoe Machinery Coy.* v. *Fussell*, 25 R. P. C. 648.

(*l*) *E.g.* making a safety skirt that ripped up to the waist instead of only to the pommel. *Nicoll* v. *Swears & Wells*, 10 R. P. C. 240.

Constructing a washing basin so as to make complete revolutions instead of tilting to a certain angle where it was stopped. *Allen* v. *Horton*, 10 R. P. C. 412.

(N.B. In this case there were also complete anticipations.)

Making a matrix of three pieces of wire material overlapping at edge so as to give extra strength, it being old to make matrices of two pieces. *Siddall & Hilton, Ltd.* v. *Wood*, 21 R. P. C. 230.

(*m*) The following are cases of this kind where the patent has been held void.

Patent for casting tubular steam heaters in one piece. (N.B. In this case the Q. B. and Ex. Ch. held that as a matter of law this was not patentable.) *Ormson* v. *Clarke* (1862), 32 L. J. (C. P.) 291.

Patent for heel plates and nails cast in one. *Blakey* v. *Latham*, 6 R. P. C. 184, C. A.

Casting certain parts of a printing machine in one piece. *Newsum* v. *Mann*, 7 R. P. C. 307.

and similarly mere division would not in general constitute subject-matter (*n*).

Other cases of analogous user.

Beyond the classes above referred to there are many cases of analogous user of a contrivance "applied in a manner or to a purpose which is not quite the same, but is analogous to the manner or the purpose in or to which it has hitherto been notoriously used" (*o*), but whether this is so is essentially a question of fact in each case, and the decisions below only help as examples (*p*).

Casting two flukes of an anchor in one. *Brunton* v. *Hawkes* (1820), 4 B. & Ald. 541.

Making the piston of a lubricating device and the screw actuating it in one piece. *Jensen* v. *Smith*, 2 R. P. C. 249, 253. See also *Longbottom* v. *Shaw*, 8 R. P. C. 333, H. L. But see *contra Legge* v. *Wakelem*, 10 R. P. C. 379, and p. 34 *n.* (*h*).

(*n*) Patent for a paving block which was merely an earlier block cut in two would be bad. *Macnamara* v. *Hulse* (1842), W. P. C. 129, *n.*

(*o*) *Per* WESTBURY, L.C., in *Harwood* v. *Great Northern Railway* (1865), 11 H. L. C. at p. 682. It can hardly be said that "notorious" use is always necessary.

(*p*) Among cases of this class where the patent has been held bad are the following:—

Use of channelled plates for fishing rails analogous to their use for joining beams of bridges. *Harwood* v. *Great Northern Rail.* (1865), 11 H. L. C. 657.

Joining tramway rails by fixing below them an inverted piece of rail embedded in concrete not patentable, a like method (but without embedding in concrete) having been proposed for joining railway rails. *Cooper Patent Anchor Rail Joint Coy.* v. *London County Council*, 23 R. P. C. 289.

Use of double angle irons old in themselves for forming water joint in gasometers. *Horton* v. *Mabon* (1862), 31 L. J. (C. P.) 255.

Use of special joint well known for hot-water coils in boiler tubes. *Baker* v. *Kinnell*, 9 R. P. C. 441, 445.

Use of ferro concrete for piles analogous to its use for other structures (*per* BUCKLEY, L.J.). *Mouchel* v. *Coignet*, 23 R. P. C. 49. Affirmed in the H. L. under the title *Hennibique* v. *William Cowlin & Sons*, 26 R. P. C. 280.

Use of wooden planking in iron ships analogous to its use in wooden ships. *Jordan* v. *Moore* (1866), L. R. 1 C. P. 624.

Use of system of construction employed for shore fences for making sea groynes. *Case* v. *Cressy*, 18 R. P. C. 417.

Use of method of supplying air for working under water which had been previously used for working in wet ground. *Bush* v. *Fox* (1856), 5 H. L. C. 707.

Use of machine previously used for straining wire for purpose of testing wire would not be subject-matter. *Johnson* v. *Rylands* (1873), Griff. 138.

Use of bisulphite of lime to preserve fresh meat analogous to its use for packing meat which had been treated in a particular way. (*Per* Lords BLACKBURN and HATHERLEY.) *Bailey* v. *Roberton* (1878), L. R. 3 A. C. 1055.

Use of paraffin to purify wood pulp in order to prevent deposit on machinery, paraffin having been previously used to dissolve such deposit. *Partington* v. *Hartlepool Pulp & Paper Coy., Ltd.*, 12 R. P. C. 295.

Use of flexible envelope through which a wire passed (such as had been previously used as a surgical instrument) for actuating bicycle brakes. *Bowden's Patent*, 22 R. P. C. 49.

Use of lock for fixing steering wheel of bicycle at rest in manner in which it had been suggested for bicycle in motion, though latter use was impracticable. *Singer* v. *Rudge Cycle Coy.*, 11 R. P. C. 463.

Use on railways of wheels made like those formerly used on road. *Losh* v. *Hague* (1839), W. P. C. 200. In the same case ABINGER, C.B., told the jury that it would not be patentable to claim the use of scissors for cutting silk instead of cloth or of a spoon for eating peas instead of soup.

New use of old article or process.

The particular use of an old article can only be patented when such use amounts to a new manufacture. Of course many such users satisfy this definition (*q*), but a very wide view has been taken with regard to analogous user of tools or machinery, and, generally speaking, it is not a patentable invention to apply tools used for one purpose to carry out another known process formerly accomplished by other means (*r*). But

See also *Westley* v. *Tolley*, 11 R. P. C. at p. 608.

Use of evaporating pipes in propagating pans analogous to their use in greenhouses. *Pascall* v. *Toope*, 8 R. P. C. 1.

Use of rubber band round coil of tape in place of other bands, though the rubber band was more effective in preventing entanglement. *West* v. *Keeves*, 28 R. P. C. 474.

Use of thick plates in place of thin ones at end of cells of icemaking machine in order to conduct heat away more quickly. The superior conductivity of thick plates was well known. *Siddeley* v. *London Hygienic Ice Coy.*, 14 R. P. C. 514.

Use of insulator to prevent arc to magnet in electric blowout. *British Thomson-Houston Coy.* v. *Manchester Corporation*, 20 R. P. C. 461, 470.

Use of special old fabric for making tyre covers. *Palmer Tyre Coy.* v. *Pneumatic Tyre Coy.*, 16 R. P. C. 451, 495.

Use of steel springs in place of whalebone for stiffening petticoat. *Thompson* v. *James* (1863), 32 Beav. 570.

Use of clamp and cleat for supporting battens in vessels. *Rockcliffe* v. *Priestman*, 15 R. P. C. 155.

Use of ordinary folding screen on window. *Sharp* v. *Brauer*, 3 R. P. C. 193.

Use of a spring blind for displaying advertisements. *Gawthorpe* v. *Mason*, 23 R. P. C. 401.

Use of strap attached to legging to wind round and secure it. *Stohwasser* v. *Humphreys*, 18 R. P. C. 116.

Use of hooks on one side of boots combined with holes on the other. *Hill* v. *Thomas*, 24 R. P. C. 415, C. A.

Use for holding water of hollow column supporting floors. *Ticklepenny* v. *Army & Navy Stores*, 5 R. P. C. 405.

Use of space under coachman's seat as glass-sided hearse for child's coffin. *Tadman* v. *Owens*, 11 R. P. C. 349.

See also remarks of judges in *Bamlett* v. *Picksley* (1875), Griff. P. C. 40.

(*q*) The following cases in which the patents were upheld illustrate this:—

Use of an iron ring covered with fibre for placing in kettle, etc., to prevent corrosion. *Peckover* v. *Rowlands*, 10 R. P. C. 234, C. A.

Use of zinc powder in boiler to prevent corrosion. *Innes* v. *Short*, 15 R. P. C. 449.

Use of secondary batteries in conjunction with dynamos as pressure regulator, though batteries had previously been used for storing electricity. (Patent held bad on other grounds.) *Lane Fox* v. *Kensington Electric Lighting Coy.*, 9 R. P. C. 417, C. A.

Use of iron plates, old in themselves, in building houses so as to render them fireproof is good subject-matter. *Boulton & Watt* v. *Bull* (1795), Dav. P. C., *per* EYRE, J., at p. 209 (*obiter*).

Where an alteration has to be made to fit the device for its new use subject-matter is more easily established, *e.g.* Use of mandrel heated internally for bending sawn wood not analogous to use of solid mandrel for bending roots, etc., to make walking sticks, the heat being applied externally. *Dangerfield* v. *Jones* (1865), 13 L. T. 142.

(*r*) See generally as to analogous user, *Dredge* v. *Parnell*, 16 R. P. C. 625, H. L.; *R.* v. *Cutler* (1847), 3 Car. & Kir. 213; *Bamlett* v. *Picksley* (1875), Griff. 40; *Tatham* v. *Dania* (1869), Griff. 213; *Losh* v. *Hague* (1838), W. P. C. 203; but *cf.* *Fellows* v. *Brookes*, 27 R. P. C. 102.

The following are examples of this class of case where the patents were held bad:—

Use of templet and band saw as used by tailors, etc., for cutting neckties. *Dredge* v. *Parnell*, 16 R. P. C. 625, H. L.

Use of blocks for building up letters, patterns, etc., for printing large posters, such blocks having been previously suggested and used for small

it would be patentable if the new materials were so different from the old that it was a real step forward to see that the application of the old machinery was practicable, *e.g.* applying machinery formerly used for making macaroni to the manufacture of steel tubes (*s*). The analogous user may of course be in the same trade and in general a patent cannot be obtained for a special method of using a machine, such method not being new in itself, unless a new product is obtained (*t*).

So, too, attempts to restrain the general use of processes are

work. (The patent had been previously upheld on a statement that alleged anticipation was unworkable—see *Shaw* v. *Jones*, 6 R. P. C. 328.) *Shaw* v. *Day*, 11 R. P. C. 188.

Use of mandrel shaped like a bottle for manufacture of straw bottle covers. *Patent Bottle Envelope Coy.* v. *Seymour* (1858), 28 L. J. (C. P.) 22.

Use for flattening "Paragon" ribs in umbrellas of tools formerly used for flattening solid ribs. *Edmond's Patent*, 6 R. P. C. 355.

Use for finishing wool and hair threads of revolving beaters which had been proposed for finishing cotton threads. *Brook* v. *Aston* (1859), 28 L. J. (Q. B.) 175.

Use of old corrugated packing for sending articles through parcels post. *Jackson* v. *Needle*, 2 R. P. C. 191.

Use of strip of canvas and rubber for fixing to tyres to repair them. *Reynolds* v. *Smith*, 20 R. P. C. 410, C. A.

Use of ordinary lock hold for locking steering wheel of bicycle when at rest. *Singer* v. *Rudge Cycle Coy.*, 11 R. P. C. 463.

Use of electric furnace for forming calcium carbide held to be analogous (in view of the state of knowledge), to its use for producing aluminium. *Acetylene Illuminating Coy., Ltd.* v. *United Alkali Coy.*, 22 R. P. C. 145, H. L.

See also cases at p. 31, *n.* (*h*), and especially *Rucker* v. *London Electric Supply Corporation*, 17 R. P. C. 279; *Northern Press & Engineering Co.* v. *Hoe*, 23 R. P. C. 613, C. A.

(*s*) *Bamlett* v. *Picksley*, *ubi supra*, at p. 242.

Some remarks of the Judges and Law Lords in *Ralston* v. *Smith* (1865), 11 H. L. C. 223, would seem to point to no user of known machinery being patentable, but on reading the judgments it will be seen that they were considering analogous users. But see *Adamant Stone Coy., Ltd.* v. *Liverpool Corporation*, 14 R. P. C. 11.

(*t*) *Kay* v. *Marshall* (1841), 2 W. P. C. 71. "*Kay* v. *Marshall* said that if the world has got the whole thing before it you putting in your boundary line in the midst of that which is common property cannot mark off a part of the common which the whole world has the right to feed on. You cannot put a hedge across it and say, 'This is something of my own which I appropriate to myself.'" *Bovill* v. *Crate* (1865), Griff. N. C. at p. 46.

The following are cases of this kind:—

Patent for using a spinning machine with a reach of 2½ *held* bad. *Kay* v. *Marshall* (1841), 2 W. P. C. 71.

Curved pieces having been used for the purpose of dress measurement there was no subject-matter in suggesting use of curves of a special shape. *Philpott* v. *Hanbury*, 2 R. P. C. 153.

Driving the grooved rollers of an embossing machine differentially, and so producing a special gloss *held* not subject-matter. Grooved rollers were old and so was differential driving, but there had been an idea that if grooved rollers were driven differentially they tore the goods. (There was a difference of opinion as to whether a claim for the new combination of machinery would have been good.) *Ralston* v. *Smith* (1865), 11 H. L. 233.

Use of a spinning machine with a certain number of heads and bobbins in a particular (old) way. *Kopp* v. *Rosenwald*, 19 R. P. C. 205, and 20 R. P. C. 154, C. A. See also *Nadel* v. *Martin*, 23 R. P. C. 41, H. L.; *Tetley* v. *Easton* (1857), 26 L. J. (C. P.) 269; *Subdury* v. *Lee*, 11 R. P. C. 58.

discouraged (*u*), but there are many more examples of variations in a process (especially if it is of a chemical nature) being held to form subject-matter than is the case with variations in the use of tools or machinery (*x*), nor are the Courts so ready to find that former uses were merely analogous (*y*).

Rules are subject to modification.

These "rules" are little more than classifications of relevant evidence. In estimating the effect of such evidence it is necessary to consider whether the former application to other purposes was wide and well known, or merely special or experimental, or only a suggestion. Further, this effect may be supplemented or modified by extrinsic evidence to prove that the application needed ingenuity, *e.g.* evidence that the want satisfied by it was of long standing.

New Article.

The novelty of an article may either lie in the size, shape, etc., of the article itself or it may lie in the method of manufacture (*z*) or material (*a*) of which it is made. When novelty in one or more of these respects has been established the further question of invention arises.

In considering whether the new article is an invention attention must be paid both to the qualities of the article itself, *e.g.* its appearance, durability, cheapness of manufacture (*b*), and also to the function it performs. Thus it is important to consider whether the new article produces a result never obtained before, or produces an old result in a better or cheaper way (*c*), or merely furnishes a useful-variant for obtaining an old result (*d*). In any of these cases the article may possess subject-matter, but naturally the Courts are more apt to find invention in an article which produces a result never

(*u*) *Patterson* v. *Gas Light & Coke Coy.* (1875), 3 A. C. 239, and 2 Ch. D. 812, 835, C. A.; *Acetylene Illuminating Coy.* v. *United Alkali Coy.*, 22 R. P. C. 145, H. L.

(*x*) See cases at p. 32, n. (*cc*).

(*y*) *E.g.* patent for extracting "garancine" from spent madder by the same process by which it had been got from fresh madder. The Judge at trial having directed verdict for defendants on subject-matter the Exchequer Chamber held it should have been left to the jury, since it was a question of fact whether fresh and spent madder were known to be substantially the same thing. *Steiner* v. *Heald* (1851), 20 L. J. (Ex.) 410.

Dipping incandescent mantles for impregnation purposes patentable although shirts, etc., had been dipped for starching. *Sunlight Incandescent Coy.* v. *Incandescent Gas Coy.*, 14 R. P. C. 557; but *cf.* cases at p. 51.

(*z*) *Cf. Elliott* v. *Aston* (1840), W. P. C. 222 (buttons covered with silk and made by pressure).

(*a*) See p. 39.

(*b*) See *Cornish* v. *Keen* (1835), W. P. C. 506; *Elmslie* v. *Boursier* (1869), L. R. 9 Eq. at p. 217; *Heath* v. *Unwin* (1855), 5 H. L. C. 505, 545.

(*c*) See *Crane* v. *Price* (1842), W. P. C. 409.

(*d*) *Scott* v. *Hamling & Coy., Ltd.*, 14 R. P. C. 123, 140; *Welsbach Incandescent Coy.* v. *New Incandescent Coy.*, 17 R. P. C. 252.

obtained before, or which produces a better or cheaper result than in one which merely furnishes a variant.

New substance.

Where a patentee has shown how to produce a new and useful substance this in general constitutes subject-matter (*e*). But here again it must be remembered that certain manufactures involve a continual production of new varieties of a substance, and such new varieties would not constitute new manufactures unless their method of production lay outside the ordinary methods of the art, or unless they had qualities which could not have been predicated. It has been said that new and useful chemical compounds are always patentable, and that it is not a valid objection to show that persons were on the point of discovering such substance, or that the course of development of chemical research would have naturally led to it (*f*). This, of course, is not a rule of law, but a finding of fact as to the chemical knowledge of the day, and there are now branches of chemical industry, where the method of production of new compounds is so well known, and their properties can be predicted with such certainty, that it is doubtful whether they are necessarily patentable.

Where such claim is made to a material *per se* it is anticipated if there has been any description of such article for any purpose (*g*).

New article may be produced by old means.

If an article new in itself is produced, and such that it can be said that its production is a real addition to public knowledge, it is of course no objection that it is entirely manufactured by old processes and that previous existing machines could have produced the result (*h*). In fact, this is the case with the greater number of new articles.

(*e*) *Badische, etc.* v. *Levinstein*, 4 R. P. C., *per* HALSBURY, L.C., at p. 462, H. L.; see also *Same* v. *Dawson*, 6 R. P. C. 387; *Acetylene Illuminating Coy.* v. *United Alkali Coy.*, 22 R. P. C. at p. 153, H. L.

But a claim for a particular kind of paper covered with wax was held bad in *Dick* v. *Ellam*, 17 R. P. C. 196, C. A. For other cases where substances new in themselves were held not to be patentable, see *Adamant Stone Coy.* v. *Liverpool Corporation*, 14 R. P. C. 11; *Maclay* v. *Lawes*, 22 R. P. C. 199. See also *Palmer Tyre Coy.* v. *Pneumatic Tyre Coy.*, 16 R. P. C. 451, 495; *Hudson Scott* v. *Barringer*, 23 R. P. C. 502, C. A.

(*f*) *Badische, &c.* v. *Levinstein*, *ubi supra.*

(*g*) *Adhesive Dry Mounting Coy., Ltd.* v. *Trapp & Coy.*, 27 R. P. C. 341, 353.

(*h*) *Acetylene Illuminating Coy.* v. *United Alkali Coy.*, 22 R. P. C. 152, H. L.

The following are cases of this class where the patents were upheld:—

Boot hook made from a single piece of wire with a tubular shank and having a groove cut in the head. All the processes were old but the product was new. *Bray* v. *Gardner*, 4 R. P. C. 400.

Wire mattress with patches of "close" weaving. "Close" weaving could have been done on the old

Variation in degree may constitute subject-matter.

A variation in scale or degree in an article or process may form subject-matter if the change is sufficient to lead to new and useful results (*i*).

Old article made of new material.

A patent may in some cases be supported for an old class of article made from a substance not previously used for it. The question here again is, was such manufacture a probable development of any existing trade, and it may be said that the Courts, which scrutinise such patents somewhat narrowly, require firstly, that, the new material should not be an obvious substitute for the old, *e.g.* the mere substitution of one wood for another (*k*), and, secondly, that the new manufacture should exhibit a considerable advantage over the old (*l*). The fact that such new material has been used for other analogous purposes may destroy the subject-matter (*m*). There may also be invention in some cases in applying a process to an article to which it has not been previously applied, if such application or its results were not obvious (*n*).

machines but was in fact new. *Dowling* v. *Billington*, 7 R. P. C. 191, C. A. (Ir.).

Wrought-iron lock and staple made in one. *Legge* v. *Wakelem*, 10 R. P. C. 379. See also remarks of EYRE, C.J., in *Boulton & Watt* v. *Bull* (1795), Davies, at p. 209. But *cf.* *Riekmann* v. *Thierry*, 14 R. P. C. 105, H. L.

(*i*) *E.g.* where it had previously been proposed to extract dust from carpets, etc., by means of air passing through a filter, but the vacuum used was only a few inches of water, it was held that a patent for a machine arranged to operate with a vacuum of five pounds was good. The earlier apparatus was quite unable to accomplish the results effected by this machine. *British Vacuum Cleaner Coy., Ltd.* v. *Suctions Cleaner, Ltd.*, 21 R. P. C. 300; *Same* v. *London & South Western Railway Coy.*, 29 R. P. C. 309, H. L. See also *Nobel's Explosive Coy., Ltd.* v. *Anderson*, 12 R. P. C. 614, H. L.; *Thompson* v. *Moore*, 6 R. P. C. at p. 455; *Bovill* v. *Cowan* (1867), W. N. 116; *Same* v. *Crate* (1868), Griff. N. C. 45, 47; *Brown's Patent*, 25 R. P. C. 86, 116, C. A.

(*k*) Thus the use of sheet felt in place of block felt for handles of bicycles was held not to be patentable. *Cooper* v. *Baedeker*, 17 R. P. C. 209, C. A. See also *MacClay* v. *Laws*, 22 R. P. C. 199, 203; *Rushton* v. *Crawley* (1870), L. R. 10 Eq. 522.

(*l*) For examples of such patents see *Muntz* v. *Foster* (1844), 2 W. P. C. 93 (use of special copper alloy for sheathing); *Walton* v. *Potter* (1841), W. P. C. 585 (use of india rubber for holding teeth of cards). In *Martin & Hyam's Patent* (1855), 25 L. T. (o. s.) 171, it was suggested that the use of gutta-percha for clogs would be patentable. In *United Telephone Coy.* v. *Harrison* (1883), 21 Ch. D. 720, it was suggested that the use of mica in telephone tympana would not be in itself patentable.

(*m*) Patent for metal eyelet having its flange embedded in celluloid held bad because hooks had been so made. *Riekmann* v. *Thierry*, 14 R. P. C. 105, H. L.

Use of solid naphthalene for enriching gas, other forms of naphthalene having been so used held not to be patentable. *Albo-Carbon Light Coy.* v. *Kidd*, 4 R. P. C. 535. See also *Palmer Tyre Coy.* v. *Pneumatic Tyre Coy.*, 16 R. P. C. 451, 494.

(*n*) Applying Neilson's hot-air blast to anthracite coal, which had not previously been considered available for use in furnaces; held good subject-matter. *Crane* v. *Price* (1842), W. P. C. 393.

Invention by selection.

There may be subject-matter in selecting one out of a class of substances for a particular purpose, although others of the class have been used before for the same purpose, and even although a patent has been taken out for the use of the whole class, provided that there is a special advantage attached to the use of the particular substance claimed and that the suggestion of using it was a real addition to former knowledge (*o*). These conditions are necessary to prevent the original patentee from being restricted in the exercise of his invention by subsequent claims for substances included in his general description the selection of which required no invention. It has also been said there may be subject-matter in selecting a special known machine best adapted for a special purpose (*p*).

New articles composed of old parts.

An article which is new may not contain any part new in itself and may yet be patentable. The cases of this kind fall into three classes. Firstly, although all the parts are old, yet the former use of one or more of them may have been for a purpose or in a manner so different to its purpose or manner in the new article that the change of user amounts to invention (*q*); secondly, the new article while not containing any new part which may be said to possess sufficient novelty, even in that particular class of machinery, to constitute subject-matter in itself, yet may constitute or contain a combination which is new and which possesses subject-matter, in that it

Applying process for extracting garancine from fresh madder to spent madder might be patentable if it was not known that the problems were identical. *Steiner* v. *Heald* (1851), 20 L. J. (Ex.) 410.

Applying principle of rectification as used in distillation of whisky to separation of oxygen from nitrogen. *British Liquid Air Coy., Ltd.* v. *British Oxygen Coy., Ltd.*, 25 R. P. C. 601, C. A., affirmed 26 R. P. C. 509, H. L.

Applying process for making carbon filaments to tungsten filaments. *Osram Lamp Works* v. *Z Electric Lamp Coy.*, 29 R. P. C. 421, 423.

(*o*) Patents of this class which have been upheld are the following :—

Use of a particular oxide of iron for gas purification though an earlier patent had covered the use of any oxide of iron. *Hills* v. *Evans* (1862), 31 L. J. (CH.) 457; *Hills* v. *London Gas Coy.* (1860), 29 L. J. (EX.) 409.

Use of a particular oxidiser for purifying flour. *Andrew's Patent*, 25 R. P. C. 477, H. L.

Use of particular substances to produce an explosive having certain special qualities though there had been a former specification suggesting the use for explosives of classes of substances of which these formed part. *Lancashire Explosives Coy., Ltd.* v. *Roburite Explosives Coy., Ltd.*, 12 R. P. C. 470, C. A.

Use of certain substances for making incandescent mantles, though these might have been included in the suggestions contained in a former specification. *Incandescent Gas Light Coy., Ltd.* v. *De Mare Incandescent Gas Light System*, 13 R. P. C. 322. See also *Wylie & Morton's Application*, 13 R. P. C. 98, L. O.

(*p*) *Adamant Stone Coy.* v. *Liverpool Corporation*, 14 R. P. C. 11, 21; but see p. 35. See also on the question of invention by selection, p. 43.

(*q*) *E.g. Brookes* v. *Lamplugh*, 15 R. P. C. 33, C. A., and see p. 26 *et seq.*

has an advantage greater or other than the sum of the advantages of the different parts ; and, thirdly, there may be subject-matter in selecting a number of parts, although all may be old and in fact may have been used before for similar purposes; if there has been such careful selection of the very best forms of each as to make a great improvement on previous practice. Similar considerations apply to new processes.

Each of these classes might be said to form a combination, but it is better for the purpose of discussion to restrict the term to the second case—that in which the novelty of the whole is said to be something different from the novelty of the parts.

Combinations.

The large majority of claims appear at first sight to be combination claims, since they specify the use of an article in certain machines, or together with certain other integers. But often these additions are merely for the purpose of description or limitation, and may be taken rather as avoiding anticipation by excluding forms of user not within their terms than as affording subject-matter (*r*).

Generally, it may be said that a monopoly of old devices can no more be obtained by claiming several together than by claiming them singly (*s*). But it may happen that by the union of certain integers special advantages are obtained, or special results follow, which were not obvious from the former use of the separate integers and in such cases the combination may form subject-matter (*t*).

The invention necessary to make a combination patentable may be in any or all of the stages before referred to (*u*), and a patentable combination may be one producing a new result,

(*r*) *Cf. Dredge* v. *Parnell*, 15 R. P. C., *per* RIGBY, L.J., at p. 90, C. A.

(*s*) "A patentee cannot make a combination within the meaning of the Patent Law by calling it a combination." *Bamlett* v. *Picksley* (1875), Griff. at p. 44.

(*t*) *E.g.*, the use of a special clamp enabling braided wire to be used for bustles. *American Braided Wire Coy.* v. *Thompson*, 6 R. P. C. 518, H. L.

Combination of parts giving a valve suitable for use in pneumatic tyres, which none of the valves in which the parts had been formerly used would have suited. *Pneumatic Tyre Coy., Ltd.* v. *Casswell*, 13 R. P. C. 375, C. A.

Placing platinum black in a special case (not new in itself) so that it could be used as a gas lighter but was normally protected from the air. *Heine* v. *Coninco Incandescent Coy.*, 21 R. P. C. 202.

Patent for a compass card consisting of a rim only with short needles attached. The substitution of the rim for the ordinary card enabled the patentee to obtain at the same time lightness and slowness of oscillation (qualities which under the old system were antagonistic) and to control the card by short needles, which allowed of easy correction. *Thomson* v. *Moore*, 7 R. P. C. 325, H. L. ; *Same* v. *Batty*, 6 R. P. C. 84.

(*u*) See p. 24.

or arriving at an old result in a better or cheaper way (*x*), or giving a useful choice of means (*y*), but the criteria of subject-matter necessarily differ in these different cases. If the result is new, this in itself is strong evidence of invention (*z*), but if the result is old the question is more difficult.

If in, say, a machine of an old class, but in which the elements are varied, all the parts perform the same functions as they have performed in earlier users, there would be a strong suspicion that all that the patentee had done was to make a more or less intelligent choice of equivalents, and that the improved result was only that to be expected from the separate advantages of such equivalents (*a*). This is especially the case where the improvements are in parts of a machine only more or less remotely connected with each other (*b*), and it may be said that in a true combination in which the patentability arises from the combination of parts in themselves old but which have not previously been used together, the advantage of the combination should not be merely the combination of the advantages of the separate parts. The combination of one part with another should either develop fresh advantages or overcome disadvantages in one or both parts or at any rate should allow the inherent capabilities of the parts to have fuller play than they had before. Often the construction of one or more of the parts must be modified to enable these results to be achieved, the invention lying not only in the conjoint use of the parts, but in the appropriate adaptations for such use (*c*).

In the case, however, of a combination producing a new result, or an old result by means substantially different from those formerly employed, this rule is relaxed in view of the intrinsic evidence of invention (*d*).

(*x*) *Crane* v. *Price* (1842), W. P. C. 393, 409; *Cornish* v. *Keene* (1835), W. P. C. 509, 517; *Cannington* v. *Nuttall* (1871), L. R. 5 H. L. 205; *International Harvester Coy. of America* v. *Peacock*, 25 R. P. C. 765, P. C.; *Harrison* v. *Anderston Foundry Coy.* (1876), 1 A. C. 574; *Murray* v. *Clayton* (1872), 7 Ch. App. 570; *Spencer* v. *Jack* (1864), 3 De J. & S. 346.

(*y*) *Scott* v. *Hamling & Coy., Ltd.*, 14 R. P. C. 123, 140.

(*z*) *Crosthwaite Fire Bar Syndicate* v. *Senior*, 26 R. P. C. 713, 732.

(*a*) *Cf. Donnersmarckhutte, etc.* v. *Electric Construction Coy.*, 27 R. P. C., *per* FLETCHER MOULTON, L.J., at p. 783, C. A.

(*b*) "But the point in a combination patent must always be that the elements of which the combination is composed are combined together so as to produce one result." *Klaber's Patent*, 23 R. P. C., *per* Lord DAVEY, at 469, H. L.; *Allen* v. *Oates*, 15 R. P. C. 298, 303; *British United Shoe Machinery Coy.* v. *Fussell*, 25 R. P. C. 631, 657, C. A.

(*c*) *International Harvester Coy. of America* v. *Peacock*, 25 R. P. C. 777.

(*d*) See note (*z*), *supra*.

In all cases the state of knowledge as to the separate parts is important, since the Courts have to consider whether the choice and combination of the parts involved research and invention (*e*), and this question is largely affected by whether the separate integers had been commonly used, so that their effects and limitations were all known, or whether their use had been merely suggested in different specifications (*f*).

These considerations emphasise the necessity of considering the advance made by the combination as a whole rather than analysing the changes in particular parts (*g*).

There may also be in some cases subject-matter in selecting for a machine a number of parts, although there may have been

Selection of parts.

(*e*) *Saxby* v. *Gloucester Wagon Coy.* (1881), 7 Q. B. D. at p. 312. *Chadburn* v. *Mechan*, 12 R. P. C. 120, 154.

(*f*) *Von Heyden* v. *Neudstadt* (1880), 50 L. J. (CH.) 126, 128, C. A., and see p. 55.

(*g*) The following are examples of combinations held patentable :—

Mixing nitroglycerine and collodion guncotton so as to form a powder less violent than either and fit for use for propulsive purposes, *Nobel's Explosive Coy., Ltd.* v. *Anderson*, 11 R. P. C. 519, C. A.

Combination of molasses and peat to form a cattle food the peat not being a mere diluent but neutralising the potassium salts in molasses. *Molassine Coy., Ltd.* v. *Townsend Ltd.*, 23 R. P. C. 27.

An instrument for giving a light consisting of sulphuric acid in a glass tube the end of which was wrapped in paper containing potassium chlorate and fat, so that on breaking the tube a light was produced, *held* to form a patentable combination, although the chemical reactions involved were well known, and glass tubes known articles. *Lukie* v. *Robinson* (1838), 2 Jur. 201.

A pneumatic valve consisting of a combination of old parts which as previously used would have been unsuitable for producing the results sought by the patented combination was held good subject-matter. *Pneumatic Tyre Coy.* v. *Casswell*, 13 R. P. C. 375, C. A.

Substitution of sliding glass panel in shape of segment of sphere on glass lamp in place of hinged panel, thus avoiding metal work and so enabling lamp to cast no shadow and also diminishing risk of breaking from unequal expansion. *Parkes* v. *Stevens* (1869), 5 Ch. App. 36.

Improved gigmill in which raising rollers were so arranged that their motion was at the same time independent and variable. Former machines had given either of these results but not both together. *Moser* v. *Marsden*, 13 R. P. C. 24, H. L.

Patent for a gramophone horn in which lower part was tapered and which also had a double joint so that it could move both horizontally and vertically. Tapering and double jointing both old in themselves, but by the combination special difficulties were surmounted. *Gramophone and Typewriter Coy., Ltd.* v. *Ullman*, 23 R. P. C. 752, C. A.

Use of bisulphite of lime in combination with gelatine so that a new process of preserving meat, etc., by glazing was produced. (Patent held bad on other grounds.) *Bailey* v. *Roberton* (1878), 3 A. C. 1055.

Use in ejecting mechanism of three parts in combination (whose use separately for this purpose was held not to be patentable), the combination permitting a spring to remain normally uncompressed, and also causing ejection to be performed by movement of gun barrel and not by spring action. *Deeley's Patent*, 13 R. P. C. 51, H. L.

Lintel for concrete floor of such shape that concrete got its main support from girder and there was also an air passage formed under girder. Neither of these results new *per se*. *Fawcett* v. *Homan*, 13 R. P. C. 398, C. A.

Compass suspended by horizontal springs under tension attached to a piece of metal hinged to compass.

analogous user of these and there is no true combination, if a

Horizontal springs under tension attached directly to compass were old, and the hinged metal had been used with vertical springs. *Kelvin* v. *Whyte Thomson*, 25 R. P. C. 177.

Roaster for use on ships, formed in one with grate and having vertical spits with bearings so that meat was always held at same angle to fire. Such bearings had been mounted in moveable roaster, and roasters formed integral with grate had also been used. *Lynch* v. *Phillips*, 26 R. P. C. 389, I. H.

The combination in the same cloth of elastic and non-elastic threads. *Cornish* v. *Keene* (1835), W. P. C. 509.

In apparatus for concentrating sulphuric acid the use of a special form of beaker, together with a special method of circulation (both of which were old separately). (See, however, judgment of Lord SHAND who seemed to hold subject-matter not to be in dispute. The patent was held bad for insufficiency.) *Kynoch & Coy., Ltd.* v. *Webb*, 17 R. P. C. 100, H. L.

The combination with a milking machine of a regulating valve to prevent the vacuum becoming excessive. *Murchland* v. *Nicholson*, 10 R. P. C. 417, O. H.

Combination of an internally toothed wheel, worked by a rachet on a lever fulcrumed on axis of wheel, and supporting a chair that raised and turned a forging, all the separate parts being old and having been used for similar purposes. *Siddell* v. *Vickers*, 7 R. P. C. 292, H. L.

In the case of a refrigerating machine it was held that it was not sufficient for the defendants to prove that if part of one prior machine and part of another were combined you would get the plaintiff's machine. *Haslam* v. *Hall*, 5 R. P. C. 1.

Combination of a screw and clamps in a trouser stretcher, though clamps and weights had previously been used, and also a screw acting on two boards to which the trousers were attached. (A doubtful case, the Court of Appeal expressly refused to decide validity.) *Gosnell* v. *Bishop*, 5 R. P. C. 41.

The following are cases of combinations held not patentable.

The use of an (old) secondary coil with a circuit worked by an (old) alternating machine producing high tension current. *Gaulard & Gibb's Patent*, 7 R. P. C. 367.

Formerly sausage-making machines had been of two classes. In one revolving knives shredded the meat by pressing it against and through a perforated plate, in another revolving knives shredded the meat against other revolving knives and also fed it forward into the skins. *Held*, that a machine in which revolving knives forced meat through a perforated plate and then other revolving knives fed it into the skin was not patentable. *Williams* v. *Nye*, 7 R. P. C. 62. (See also *Northern Press* v. *Hoe*, 23 R. P. C. 613, C. A.)

In certain classes of electrical machinery sudden excessive demands for current had been met by the use of a fly-wheel and also by special excitation of the fields. It was held that a combination of the two methods was not patentable. *Donnersmarckhutte, etc.* v. *Electrical Construction Coy.*, 27 R. P. C. 774, C. A.

Signalling and interlocking device which had the signalling device the same (except for one variation held to be a mere mechanical equivalent) as was shown in one specification, and the interlocking device the same as was shown in another, each part performing its original function. *Saxby* v. *Gloucester Wagon Coy.*, 7 Q. B. D. 305, 312.

The attachment of an old abdominal belt to a corset. *Wardroper* v. *Gibbs*, 20 R. P. C. 355.

Fastening together protecting sheets to be used for stencil purposes. *Klaber's Patent*, 23 R. P. C. 461, H. L.

Combining a "Dewar" flask with a protective covering. *Thermos Ltd.* v. *Isola Ltd.*, 27 R. P. C. 388.

Combining grooves (held to be equivalent to roughing which was old) and an enlarged end in a racquet handle. *Slazenger* v. *Feltham*, 6 R. P. C. 232, C. A. (overruling *Moss* v. *Malins*, 3 R. P. C. 373).

The combination of a watering pot of canister shape and a particular form of handle. *Haws* v. *Harding*, 14 R. P. C. 930, C. A.

Combination of a vertical pipe of special shape and a horizontal pipe to form a water closet. *Held* not patentable since each pipe performed its old function. *Allen* v. *Oates & Green*, 15 R. P. C. 744, C. A.

Woolwashing tanks had been made with the bottoms of various shapes,

greatly improved result is obtained (*h*). Patents of this class are, however, closely scrutinised, especially if the parts have been in common use (*i*). There is a certain amount of analogy between patents of this class and patents for the selection of that one of a class of substances which gives a specially good result (*j*).

Invention by omission.

There may be invention in omitting a stage of a process (*k*) or an unnecessary part of a machine (*l*) or an unnecessary ingredient (*m*).

Novelty constituting invention.

In some cases which have been before the Courts the Court found that the article or combination was in fact new, or achieved a new result, and held that this in itself was sufficient

including sloping bottoms. A slit had also been made in the false bottom to get in a brush. Held that a tank with a bottom sloping to one side and a slit in false bottom on that side not patentable. *McNaught* v. *Dawson*, 23 R. P. C. 219, C. A.

A combination of rubber thread wound under tension on a gutta-percha core for golf balls *held* bad in view of the fact that rubber thread had been so wound on other cores in golf balls, and golf balls had been made of gutta-percha. (The H. L. seemed to have doubted the advantages claimed for the ball.) *Haskell Golf Ball Coy.* v. *Hutchinson*, 25 R. P. C. 194, H. L.

The union in the same shop of two trades which had formerly been carried on separately would not be subject-matter (*obiter per* Lord MACKENZIE). *Templeton* v. *Macfarlane* (1848), 1 H. L. C. 595.

(*h*) *Van Berkel* v. *Simpson*, 24 R. P. C. 117, 135.

(*i*) See *Northern Press* v. *Hoe*, 23 R. P. C. 613, C. A.

(*j*) See cases at p. 40, *n.* (*o*).

"The essence of the invention appears to be that the inventor has taken a great many things which were common knowledge and tried which of these items of common knowledge would produce a useful result and a new result, and he has ascertained that following the process described by him you will arrive at the new and useful result which he does arrive at, and I consider that that is undoubtedly invention." *Lancashire Explosive Coy.* v. *Roburite Explosive Coy.*, 12 R. P. C., *per* RIGBY, L.J., at p. 482.

"In selecting with a view to alteration one may be inventing." *British Westinghouse Coy.* v. *Braulik*, 27 R. P. C., *per* FLETCHER MOULTON, L.J., at p. 224. See also *Webb* v. *Kynoch Ltd.*, 15 R. P. C. 290, Ir.

(*k*) "It is just as much invention to reject the bad as to select the good." *British Westinghouse Coy.* v. *Braulik*, 27 R. P. C., *per* FLETCHER MOULTON, L.J., at p. 224.

The following are examples of such patents which have been held good:—

Making gas direct from seeds instead of first expressing the oil, and then making gas from the expressed oil. *Booth* v. *Kennard* (1856), 26 L. J. (EX.) 305.

Varying a chemical process for the production of dyes by omitting the first stage, which the patentee had proved to be useless. *Badische, &c.* v. *Société des Usines du Rhone*, 15 R. P. C. 359, C. A. See also *Leonhardt* v. *Kalle*, p. 46, *n.* (*r*), and *Russell* v. *Cowley*, p. 50.

(*l*) *Minter* v. *Mower* (1835), W. P. C. 140. *Cf.* also *British Motor Syndicate* v. *Universal Motor Carriage Coy.*, 16 R. P. C. 113, and *Beston* v. *Watts*, 25 R. P. C. 19, C. A.

(*m*) Using cyanide of potassium alone for the extraction of gold from its ores not anticipated by a specification suggesting the use of a mixture of cyanide of potassium and carbonate of ammonia. *Cassel Gold Extracting Coy., Ltd.* v. *Cyanide Gold Recovery Syndicate*, 12 R. P. C. 303, C. A.

evidence of invention (*n*), though in some cases the variation required little, if any, ingenuity (*o*).

Invention where result could not be foreseen.

In some cases, and more particularly in the case of chemical patents, a variation of old methods has been held to form subject-matter because it was not possible to predicate the new result from the results of the old method with any certainty or without experiments and research (*r*).

(*n*) *E.g.* frame containing prism for use as pavement light. *Hayward* v. *Hamilton* (1881), Griff. 115, C. A.

Glass semi-cylinders mounted on trunnions for use in producing photographic prints. *Halden* v. *Hall*, 21 R. P. C. 609.

Steam trap in which for first time motion was at junction of two rods and not at joint. *Geipel's Patent*, 21 R. P. C. 379, C. A.

Use of auxiliary drum for printing in stop news, auxiliary drums being old for other purposes in printing. *Taylor* v. *Annand*, 18 R. P. C. 53, H. L.

An electric battery having certain constituents (all previously used in various ways), and in particular having outer layer "semi-solid." The battery was in fact very successful, though it was not clear that reason for this was due to any particular variation. *Patent Exploitation Ltd.* v. *Siemens*, 21 R. P. C. 541, H. L.; but *cf. Same* v. *American Novelty Coy.*, p. 52, *n.* (*f*).

Feeding coal by an oscillating radial arm good subject-matter though coal had been fed by the backward and forward movement of a pusher, and also by a rotating arm acting by the combined effect of the blow and of centrifugal force. *Proctor* v. *Bennis*, 4 R. P. C. 333, C. A.

Machine for testing wire in which it was uncoiled from one drum and coiled on another driven differentially, though previously wire had been strained by winding it on a drum, while it was unwound from an independent drum retarded by a brake. *Johnson* v. *Rylands* (1873), Griff. 138.

Lamp adapted to fit into ordinary socket, but made to rotate so that either of two filaments of different resistance could be brought into use. *True and Variable Lamp Syndicate* v. *Bryant*, 25 R. P. C. 461. See also *Stepney Spare Wheel Ltd.* v. *Hall*, p. 27 (*b*), *n.*

(*o*) *E.g. Taylor* v. *Annand*, *supra*.

(*r*) *Nobel's Explosive Coy., Ltd.* v. *Anderson*, 11 R. P. C. at p. 127; *British Liquid Air Coy.* v. *British Oxygen Coy., Ltd.*, 25 R. P. C. at p. 601, see p. 18; *Orram Lamp Works* v. *Z Electric Lamp Coy.*, 29 R. P. C. 421, 423; *Moseley* v. *Victoria Rubber Coy.*, 4 R. P. C. at p. 252; *British United Shoe Machinery Coy.* v. *Fussel*, 25 R. P. C. 648 C. A.; *Croysdale* v. *Fisher*, 1 R. P. C. at p. 17; *Electric Telegraph Coy.* v. *Brett* (1851), 20 L. J. (C. P.) 131; *Brown's Patent*, 25 R. P. C. 114, C. A.

But where in view of the knowledge of the time the result would appear *à priori* to be probable mere experiment to verify this may not be sufficient. *Alsop's Patent*, *infra*.

The following are examples of such patents which have been held good:—

Formerly a blasting powder had been made by adding 7 per cent. of collodion guncotton to nitroglycerine. A process in which the proportion of collodion guncotton was raised to 60 per cent. of the whole, and which gave a powder suitable for propulsive purposes held good subject-matter. *Nobel's Explosive Coy.* v. *Anderson*, 11 R. P. C. 115.

An explosive was formed by taking certain substances which belonged to a large class whose use had been suggested for explosive purposes. It was admitted that a chemist would have known this mixture would have produced an explosive, but not that the explosive would have the desirable qualities it in fact possessed. *Lancashire Explosives Coy.* v. *Roburite Explosives Coy.*, 12 R. P. C. 471, C. A.

In a chemical process a direction to stop the oxidation at an earlier point than usual gave a new dye stuff. Held good subject-matter. *Leonhardt & Coy.* v. *Kallé*, 12 R. P. C. 306.

Example of process variations not constituting subject-matter:—

The use of electricity to produce certain gases for conditioning flour not subject-matter, such gases having been formerly produced by means of nitric acid, and the chemical know-

Invention by rendering process practicable.

It must never be forgotten that patent rights are primarily intended as the reward for the introduction of a "new manufacture." There may, therefore, be subject-matter in introducing a new manufacture by describing a commercial process, though it is based on principles already applied in laboratory work or known in other forms (*t*). So, too, in considering whether the patentee has introduced a new manufacture the Courts do not pay much attention to previous suggestions which were not available commercially, *e.g.* suggestions for machines which would have been more expensive than hand labour (*u*). But this application to commercial purposes must involve some ingenuity, or be of such a nature that its success could not have been predicted with certainty (*x*).

Mere discovery not sufficient.

Mere discovery of the nature or action of a process, or that certain results do or do not follow its normal use, however commercially valuable such discovery may be, does not constitute "invention" (*y*). Were it possible to get a patent for such discoveries it would have the effect of restricting the use of the process.

ledge of the day making it appear probable that electricity would produce the same result. *Alsop's Patent*, 24 R. P. C. 733.

(*t*) *Fernie* v. *Young* (1866), L. R. 1 H. L. 63; *Von Heyden* v. *Neudstadt* (1880), 14 Ch. D. 230; *Washburn & Moen Coy.* v. *Paterson*, 2 R. P. C. 27; *Betts* v. *Menzies* (1862), 10 H. L. C. 117; *Hills* v. *London Gas Coy.* (1860), 29 L. J. (EX.) 409, 413, 424; *Incandescent Gas Light Coy.* v. *De Mare Incandescent Gas Light System*, 13 R. P. C. 559, C. A.; *Edison & Swan Coy.* v. *Woodhouse*, 4 R. P. C. 79, 106, C. A.

(*u*) *Murray* v. *Clayton* (1872), 7 Ch. App. 570.

(*x*) *Acetylene Illuminating Coy., Ltd.* v. *United Alkali Coy., Ltd.*, 22 R. P. C. 145, H. L.; *British Thomson Houston Coy., Ltd.* v. *Mayor of Manchester*, 20 R. P. C. 461.

(*y*) As to the difference between discovery and invention, see *Reynolds* v. *Smith*, 20 R. P. C., *per* BUCKLEY, L.J., at p. 126.

The following cases illustrate this point:—

Discovery that a known process for making calcium carbide could be used on a commercial scale without injurious electrolisation did not give right to a patent for such use. *Acetylene Illuminating Coy., Ltd.* v. *United Alkali Coy., Ltd.*, 22 R. P. C. 145, H. L.

Discovery that it was practicable to drive a concrete pile did not give right to a patent for such a pile, which had previously been suggested. *Mouchel* v. *Coignet*, 24 R. P. C. 229, C. A. affirmed; in H. L. *sub. nom. Hennebique* v. *Cowlin*, 26 R. P. C. 280, H. L.

Discovery that it was practicable to drive grooved rollers in an embossing machine differentially without tearing goods held not to be subject-matter. *Ralston* v. *Smith* (1865), 11 H. L. C. 223.

Appreciating how to obtain the full advantage of the use of a wheel for raising water by centrifugal force, the wheel being old for this purpose, is not sufficient to support a patent. *Tetley* v. *Easton* (1857), 26 L. J. (C. P.) 293.

The fact that the patentee of an early electrical machine did not see all its advantages held not to prevent it from anticipating a later invention. *King Brown* v. *Anglo-American Brush Corporation*, 9 R. P. C. 313, H. L.

Discovery that in purifying gas with lime, lime should be frequently changed. *Paterson* v. *Gas Light & Coke Coy.* (1875), 3 A. C. 239.

Result more important than means.

In judging of invention it may be broadly said that the result is more important than the means (*z*), and if a new machine is made which enables an important new result (*a*) to be obtained it may be patentable no matter how small the difference between it and what went before, if that difference is such that without it the new result could not be obtained (*b*), or is in other words, "the difference between failure and success" (*c*). Similarly a slight alteration or new direction in a process may lead to such an important change as to be subject-matter (*d*).

(*z*) *Day* v. *Davies*, 22 R. P. C. 34, 42. "Sometimes the greatest inventive skill is shown by the smallest alteration." *Electrolytic Plating Apparatus Coy.* v. *Evans*, 17 R. P. C., *per* WILLS, J., at p. 741.

(*a*) As to the necessary amount of improvement, see *Gramophone Coy., Ltd.* v. *Ruhl*, 27 R. P. C. 629, and 28 R. P. C. 20, C. A.

(*b*) *Hinks* v. *Safety Lighting Coy.* (1876), 4 Ch. D. 607; *Gammons* v. *Battersby*, *ubi infra*, *n.* (*d*); *Brown's Patent*, 25 R. P. C. 86, C. A. Of course the improvement must be due to the change, see *Arkwright's Patent* (1785), W. P. C. at p. 72; *Pow* v. *Taunton* (1845), 9 Jur. 1056.

(*c*) *Edison & Swan Coy.* v. *Holland*, 6 R. P. C. 243, 283.

(*d*) Among cases illustrating this point in which the patents have been upheld are the following :—

Patent for a machine for disinfecting fabrics, etc., by dry steam. The fabrics were put into an inner chamber into which steam was admitted, and steam was also let into the outer chamber at such a pressure that the steam in the inner chamber was kept dry. This was held good subject-matter though there had previously been a machine with similar chambers, but which could not have been used for the new process, *i.e.* working with dry steam, as the fastenings were too weak to hold steam at the necessary pressure. *Lyon* v. *Goddard*, 11 R. P. C. 113, H. L. *Cf. Lake & Elliot* v. *Rotax Motor Accessories, Ltd.*, 28 R. P. C. 532, C. A.

Improvements in carpet cleaning machines in which by substitution of pump and filter for fans, etc., and use of narrow slit, a machine was for the first time produced capable *inter alia* of extracting dust from interior of carpets or from underneath them. *British Vacuum Cleaner Coy., Ltd.* v. *Suctions Cleaners Ltd.*, 21 R. P. C. 303; *British Vacuum Cleaner Coy., Ltd.*, v. *London & South Western Railway Coy.*, 29 R. P. C., H. L. 309.

Patent for a brickmaking machine, which was only distinguished from a former machine by small changes in the cutting mechanism and by the provision of means for removing the bricks automatically, but these changes made the machine cheaper instead of dearer than hand labour. *Murray* v. *Clayton* (1872), 7 Ch. App. 570.

Use of gas for flaming lace. Other flames had been used but there was a difficulty in getting them to pass through lace and the change revolutionised the industry. *Hall's Patent* (1817), W. P. C. 97.

Improvements in sewing machine for boots in which the looper was made to bring thread up to notch of needle instead of as formerly presenting it to point of needle, thus avoiding danger of breakage. *English & American Machine Coy., Ltd.* v. *Union Boot & Shoe Machines Coy.*, 11 R. P. C. 367, C. A.

Improvement in pulp strainers in which the oscillating plate was arranged to move about the same axis as the crank working it, so avoiding vibration. *White* v. *Bertrams, Ltd.*, 14 R. P. C. 735, I. H.

Patent for an improved latch by which a door was opened by pushing or pulling a handle. A prior specification for a similar latch had shown apparatus which would not permit the door to be opened and shut on the same side. *Kaye* v. *Chubb*, 5 R. P. C. 641, 652, H. L.

Improvements in oil engines in which small variations in the air and oil inlets enabled heavy oils to be used

Where a small change has been made in a known article or process to "effect a small result of trifling or dubious utility, where only light oils could be used before. *Day* v. *Davies*, 22 R. P. C. 34.

Variations which are not patentable.

Process for making rims for rubber tyres, by first rolling them with a "W" section and then flattening the "W" and so causing sides to come together so as to give undercut groove. *Held*, not anticipated by process for rolling plates in which a section with inclined sides and concave base was produced, since this would have been useless for object desired. *Shrewsbury & Talbot* v. *Sterckx*, 13 R. P. C. 44, C. A.

Use of a spring in place of a fixed seating for the arms of a lever of a steam trap. This prevented straining should the temperature rise too high, and also allowed the trap to be opened by hand to give a free blow through. *Geipel* v. *Mayor of Manchester*, 21 R. P. C. 41.

Use of chains instead of weights for applying pressure in manufacture of ensilage, thus getting a greatly improved result. *Reynolds* v. *Amos*, 3 R. P. C. 215.

Improved process for making tin-coated lead for use in capsules by first separately laminating the tin and lead and then laying the tin on the lead and incorporating by rolling. There had been a previous patent for making tin-coated lead, but it had not prescribed the preliminary lamination or smooth application of the surfaces, and the new product was a great improvement. *Betts* v. *Menzies* (1862), 10 H. L. C. 117; *Betts* v. *Neilson* (1866), 3 Ch. App. 429.

Improvements in machine for sewing bindings on hats by which a slight rearrangement of the gauges enabled the binding for the first time to be sewn along one edge and then "snapped" on. *Gammons* v. *Battersby*, 21 R. P. C. 322, C. A.

Clamp for insertion at the corners of cardboard boxes made of a strip of metal with small claws, which differed from former clamps in that claws remained in cardboard and did not project inside. *Actien Gesellschaft für Cartonnägen Industrie* v. *Schroeder*, 13 R. P. C. 466.

Variation in method of putting adjustable weights on plough wheels, the effect of which was to save use of a horse a day. *International Harvester Coy. of America* v. *Peacock*, 25 R. P. C. 765, P. C.

Increasing depth of water lute in machine for testing drains so that the machine could also be used for a pressure test. *Macdonald* v. *Fraser*, 11 R. P. C. 169, I. H.

Applying pressure to circumference instead of centre of buttons, thereby enabling silk-covered buttons to be made by pressure without spoiling the silk. *Elliot* v. *Aston* (1840), W. P. C. 222.

Arranging gauge at mouth of beer tap so that air could not get behind it, and thus preventing dripping. *Mathews* v. *Pamenter*, 13 R. P. C. 514.

Clothing fancy rollers with wire strips placed far apart instead of close together as formerly, and thus getting better air current. *Sykes* v. *Howarth* (1879), 12 Ch. D. 826.

Use of a carbonised filament instead of a carbon rod in incandescent lamps, thus getting a greatly improved result. *Edison* v. *Woodhouse* (first action), 4 R. P. C. 79, C. A.

Use of zinc powder in boiler to prevent corrosion. Zinc bars had previously been used, but the increased surface greatly improved action. *Innes* v. *Short*, 15 R. P. C. 449.

Apparatus for electro-plating small articles consisting of a perforated rotating drum whose shaft formed the cathodes. The rotation of drum insured constant rubbing. A former specification had suggested a rotary drum with a spiral contact wire, but patented apparatus gave greatly improved results. *Electrolytic Plating Apparatus Coy.* v. *Evans*, 17 R. P. C. 733; *Electrolytic Plating Apparatus Coy.* v. *Holland*, 18 R. P. C. 521.

Process for assisting evaporation of sugar by bringing in the air by a horizontal pipe near surface and forcing it down through a series of vertical pipes. A prior specification had suggested bringing air in by a perforated pipe near the bottom, but such process had no practical utility. *Hullet* v. *Hague* (1831), 9 L. J. (o. s.) K. B. 242.

Improvements in otter boards by attaching ropes to a bracket arranged centrally and rising above plane of board and so enabling boards to be used with the ordinary trawl net. *Scott* v. *Hamling & Coy., Ltd.*, 14

or where the alteration is not essential to the result obtained,

R. P. C. 123; *Scott* v. *Hull Steam Coy.*, 14 R. P. C. 143.

Patent for making nuts by cold pressing, by the use of a die having a recess with a flaring opening so that the tool entered and yet the blank was properly formed. In former practice there was danger, if the size of the recess was exactly that of the punching tool, that the latter might be injured if it got out of truth, and if the recess was larger the blank was not properly formed. *Fellows* v. *Brooks*, 27 R. P. C. 89.

Making gas pipe by passing bent iron through hole in plate without use of mandril. There had been a similar process with mandril, and tubes had been made by hammering similarly bent iron on anvil or by propelling similarly bent iron through grooved rollers; *Russell* v. *Cowley* (1835), W. P. C. 457; *Russell* v. *Ledsam* (1847), 1 H. L. C. 687; *Russell* v. *Crichton*, 2 S. 1. 893.

Patent for improvements in protecting covers for carbons for arc lamps. It was known that such covers should have a tight fit at entrance, but patentee also made the space enclosed between them and the carbon small, so as to diminish the amount of gas and the risk of explosion. *Jandus Arc Lamp Coy., Ltd.* v. *Arc Lamp Coy.*, 22 R. P. C. 277.

Patent for a lamp in which the column of oil for feeding the reservoir was balanced against the pressure of air in a trap. A former specification has shown a lamp, on the same principle, but which was liable to flooding on changes of temperature owing to the burner chamber being too low. *Defries* v. *Sherwood*, 14 R. P. C. 313.

Fixing plain or crushed glass or sand on to the back of glass, which was to be used for facing bricks, by means of a flux melting below the melting point of the glass. Sand, etc., had been previously attached to glass in plastic state, but the heating necessary for the earlier process had been liable to injure the appearance of the glass. *National Opalite Coy., Ltd.* v. *Ceralite Syndicate, Ltd.*, 13 R. P. C. 649.

Improved refrigerating machine intended to keep the air at a moderate temperature, which had inclined pipe with a stop cock for letting off moisture to prevent formation of snow. Earlier machine had no cock, and snow was formed causing intense cold. Cocks were known in refrigerating machines, but not for the same purpose. *Haslam* v. *Hall*, 5 R. P. C. 1.

Patent for a razor stropping machine. The razor was supported on a rocker round which strop passed. The friction of the strop moving in either direction so turned rocker and razor that the latter was held in the proper position for stropping. In an earlier device razor holder was rotated not by friction of strop, but by springs communicating with a lever supporting two pulleys round which strop passed. *Beston* v. *Watts*, 25 R. P. C. 19, C. A.

In centrifugal machines two types of bearing were known, one a single bearing with a cylindrical rubber washer, one with upper and lower bearing each with flat conical washers. *Held*, that patent for a single bearing with a steep conical washer was good in view of improved result. *Watson, Laidlaw & Coy.* v. *Potts, Cassels & Williamson*, 27 R. P. C. 541, I. H. See also same case 28 R. P. C. 565, H. L.

Patent for a cradle for draw bars in railway carriages in which excessive strains on rivets occurring in earlier suggestions for apparatus were avoided. *Steel Railway Journal Box Coy., Ltd.* v. *Hurst, Nelson & Coy., Ltd.*, 26 R. P. C. 493, C. A.

Improvements in covers for preserves having sloping sides which lay tangentially on a rubber ring surrounding the neck, in order that the slight pressure due to the vacuum inside the jars might be sufficient, owing to the broad contact surface between ring and tangential sides of cover, to give an airtight closure, while at the same time it was easy to hold cover by a spring during boiling process. There had been many other covers approaching this, but none so advantageous. *Automatic Air Tight Cover, Ltd.* v. *Stockford*, 19 R. P. C. 453.

Improvements in special type of water closets by varying the position of the dipper pan and so getting a much more effective flush. The previous form was not practically successful. *Duckett & Son, Ltd.* v. *Whitehead*, 12 R. P. C. 376, C. A.

Improvements in cigar cutters by

the new variation is in general not patentable (*e*). In many of these cases the alteration involves the sacrifice of advantages in some respects in order to gain additional advantages in other respects, so as to suit the article for some particular use. The Courts have looked on such adaptations as not being a "new manufacture," but as variations properly forming part of a workman's business, and have refused to restrict the general right to use them. Another view of such cases is that the advantage gained is either only to meet some special need which may have recently arisen or is for other reasons so small, that

addition of an outer tube which rendered it easier to hold and work. *Hardmuth* v. *Baker*, 22 R. P. C. 66, C. A.

Fixing the recording and reproducing points of a phonograph on the same diaphragm, thereby avoiding need of change. *Edison Bell Phonograph Corporation* v. *Smith*, 11 R. P. C. 389, C. A.

In centrifugal machines two types of bearing were known, one a single bearing with a cylindrical rubber washer, one with upper and lower bearing each with flat conical washers. *Held*, that patent for a single bearing with a steep conical washer was good in view of improved result. *Watson Laidlaw & Co.* v. *Potts, Cassels & Williamson*, 27 R. P. C. 541, I. H. See also same case 28 R. P. C. 565, H. L.

See also *Marine Torch Coy.* v. *Holmes*, 29 R. P. C. 686.

The following are cases of chemical processes :—

Process for getting cholesterine from wool fat by treating with an alkali, separating in centrifugal machine, and then purifying with water. A similar process had been described omitting the use of the alkali, but a pure article could not be obtained without using this to saponify the fatty acids. *Benno Jaffe* v. *Richardson*, 11 R. P. C. 261, C. A.

Patent for making threads from viscose by forcing it into a bath of sulphuric acid and sodium sulphate having an acid concentration of 20 per cent., and a sodium sulphate concentration of 23 per cent. A prior specification had suggested for same purpose the use of a bath having an acid concentration of 9 per cent. The new result was much better and the patentee was able to use "new" viscose while former "aged" viscose had to be used. *Max Muller's Patent*, 24 R. P. C. 469.

In a certain known chemical process the patentee gave two new directions: (1) to use an excess of acid; (2) to keep the temperature below 5° Cent. This increased the useful yield from 25 per cent. to 60 per cent. *Saccharin Corporation Ltd.* v. *Chemicals and Drugs Coy.*, 17 R. P. C. 28.

Variation in chemical process enabling pure substance to be got in place of substance with at least 18 per cent. of impurity. *Badische* v. *Société des Usines du Rhone*, 14 R. P. C. 873.

Patent for mixing maltine with dough and keeping it at 150° Cent. for three hours, not anticipated by mixing malt with dough and baking straight away, which stopped action of malt. *Montgomery* v. *Paterson*, 11 R. P. C. 633, I. H.

The following cases may also be consulted on this point, the patents being upheld in view of the improved result :—

Making screw with nick deeper in middle than at sides. *Frearson* v. *Loe* (1878), 9 Ch. D. 48.

Improvements in method of mounting engine in road vehicles. *Foden* v. *Wallis*, 25 R. P. C. 501.

Substituting a pin and hole internal feed for a ratchet feed. *Birch* v. *Harrap*, 13 R. P. C. 615, C. A.

Small alteration in lamps. *Hinks* v. *Safety Lighting Coy.* (1876), 4 Ch. D. 607. See also *Perry* v. *Société des Lunetiers*, 13 R. P. C. 664.

(*e*) *Waterhouse's Patent*, 23 R. P. C., *per* ROMER, L.J., at p. 477. See also *Dangerfield* v. *Jones* (1865), 13 L. T. 142; *R.* v. *Arkwright* (1785), W. P. C. 64; *Pow* v. *Taunton* (1845), 9 Jur. 1056.

manufacturers may well have been content to employ other forms, and that therefore the novelty of the result is no proof in itself of invention (*f*).

Patents for printed matter, etc.

Although it can hardly be said to be a rule of law that there can be no patentable subject-matter in printing or drawing

(*f*) The following are cases of this kind in which small variations have been held not to be subject-matter :—

Braiding machine made so as to be capable of rotary motion where the same results could be got from a former machine, though in fact this was only capable of oscillatory motion. *Nadel* v. *Martin*, 22 R. P. C. 41, H. L.

Safety device for carding machines in which the action of throwing belt on to loose pulley opened the machine, instead of as formerly releasing detent and permitting it to be opened. *Witham* v. *Catlow*, 25 R. P. C. 788.

Variation in battery in which one of the layers was "semi-solid." In anticipation chiefly relied upon this layer was "phlegmy." On evidence being given that this difference produced no result the patent was held bad although it had previously been upheld. *Patent Exploitation, Ltd.* v. *American Novelty Coy.*, 22 R. P. C. 317, H. L. *Cf. Patent Exploitation, Ltd.* v. *Siemens*, p. 46, *n.* (*n*).

Making old fitting for connecting pump to tyre with a collar so that parts could not come apart. Also arranging so that all screws turned same way. *Atkinson* v. *Britton*, 27 R. P. C. 469, C. A.

Variation in gear changing device by inverting teeth and notches and sliding a shaft instead of moving an arc on an axle. *Stroud* v. *Humber, Ltd.*, 24 R. P. C. 141.

Variation in lock by which detent, instead of projecting and being actuated by door jamb, was made flush and worked by special projecting part. *Tucker* v. *Kaye*, 8 R. P. C. 230, C. A.

Variation in stretcher for wire mattress so that it was arranged above instead of within the bed frame. *Rowcliffe* v. *Longford Wire Coy.*, 4 R. P. C. 281.

Pressing together lead-holding jaws in a pencil case by movement of outer sheath instead of movement of ring. *Lawrence* v. *Perry*, 2 R. P. C. 179.

Substitution of lever worked by thumb for simple thumb piece. *Consolidated Pneumatic Tool Coy., Ltd.* v. *Clark*, 24 R. P. C. 593, C. A.

Variation in shape of railway rug so that there was platform under feet and it could be used by motor driver. *Arnot* v. *Dunlop Pneumatic Tyre Coy., Ltd.*, 25 R. P. C. 309, H. L.

Small variation in the shape of unions for pipes. *Waterhouse's Patent*, 23 R. P. C. 471, C. A.

Variation in section of solid rubber tyre. *Sirdar Rubber Coy.* v. *Wallington*, 24 R. P. C. 539, H. L.

Variation in shape of channel in neck of lemonade bottle. *Beavis* v. *Rylands Glass Coy., Ltd.*, 17 R. P. C. 704, C. A.

Variation in number of teeth for fasteners for hats. *Savage* v. *Harris*, 13 R. P. C. 304, C. A.

Omission of nut in device for fixing tension pulley for blind cords. *Dobbs* v. *Penn* (1849), 3 Ex. 427.

Variation in position of wire in lamp used to conduct heat to and liquify the solid paraffin. *Cera Light Coy.* v. *Dobbie*, 11 R. P. C. 10.

Addition to bootmaking machine of a side guard to the shoot for nails. *British United Shoe Machinery Coy., Ltd.* v. *Claughton*, 24 R. P. C. 33, C. A.

Substitution of hinged for sliding plates on top of stove. *Fletcher* v. *Arden*, 5 R. P. C. 46.

Variation of spacing of holes in boots, and use of hooks on one side and holes on the other. *Hill* v. *Thomas*, 24 R. P. C. 415, C. A.

Variation in shape of hoe. *Sudbury* v. *Lee*, 11 R. P. C. 58.

Putting a glass window into a milk receptacle. *Murchland* v. *Nicholson*, 10 R. P. C. 417, O. H.

Substitution of chlorine gas for chlorine water in purifying cotton seed oil foots. *Wilson* v. *Union Oil Mills*, 9 R. P. C. 57.

Changes in te nperature and ingredients in process for baking producing no change of importance in result. *Haddan's Patent*, 2 R. P. C. 218.

See also *Montgomery* v. *Paterson*, 11 R. P. C. 633, I. H., where a similar

on articles signs that facilitate their use such patents have in fact not been upheld by the Courts (*g*).

Patents for improvements.

It has been held from very early times that an improvement in an article or process may form subject-matter for letters patent (*h*), and in fact nearly all patents are for improvements. It is no objection that the former process is the subject of an existing (or expired) patent, or that the improved process could only be worked by license under a former patent (*i*). Formerly there were many decisions turning on the point of whether the improvement alone or the whole machine or process had been claimed, but these have been rendered unimportant since the true rule for the construction or combination claims was laid down in *Harrison* v. *Anderston Foundry Company* (*k*).

patent was held bad, but another for changes producing important results was held good, see p. 51.

(*g*) Patent for improved stencil paper having a scale along edge and a line to show where it was to be inserted into the duplicating machine, held bad. *Klaber's Patent*, 19 R. P. C. 174.

Patent for drain trap with supports for spirit level and a horizontal line drawn close to them to facilitate levelling, held bad. *Duckett & Son, Ltd.* v. *Sankey*, 16 R. P. C. 357. See also *Philpott* v. *Hanbury*, 2 R. P. C. 33; and *Johnson's Application*, p. 255, *n.* (*q*).

(*h*) *R.* v. *Arkwright* (1785), W. P. C. 64.

(*i*) *Crane* v. *Price* (1842), W. P. C. 377.

(*k*) (1876), 1 A. C. 574. See also chapter on CONSTRUCTION, p. 119.

CHAPTER III

PUBLIC KNOWLEDGE

Effect of prior publications.

ALTHOUGH all knowledge once it has been published within the realm becomes, whatever may have been the form of publication (*a*), part of the public knowledge, so that a monopoly for the precise matter published cannot afterwards be granted (*b*), yet the circumstances and extent of the publication are of great importance when the subject-matter of a later patent has to be considered. The question here is, Has the patentee made a real addition to public knowledge, or is what he has done a mere development of pre-existing knowledge such as a competent craftsman might be expected to make? It would be absurd to assume for this test that such a competent craftsman should have present all matters in his mind which were within the realm of public knowledge (*c*), and it has therefore always been recognised that a patentee may make a real addition to public knowledge, amounting to invention, by the useful assemblage of isolated matters already known (*d*).

In judging of the effect of any prior public knowledge in limiting the field of invention it is necessary to consider whether

(*a*) There are now two statutory exceptions: see pp. 65, 66.

(*b*) A good example of such anticipation will be found in *Mouchel* v. *Coignet*, 23 R. P. C. 649, C. A., affirmed in H. L. under title of *Hennebique* v. *Cowlin*, 26 R. P. C. 280.

(*c*) *British Westinghouse Coy.* v. *Braulik*, 27 R. P. C., *per* FLETCHER MOULTON, L.J., at p. 224. But see *King Brown & Coy.* v. *Anglo-American Brush Corporation*, 9 R. P. C., *per* Lord WATSON, at p. 320.

(*d*) "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 defendant's contention, that contention stands thereby self-condemned." *Von Heyden* v. *Neudstadt* (1880), 50 L. J. (CH.) 128, C. A.; *cf.* *Huddart* v. *Grimshaw* (1803), Davies 265, 278; *Lancashire Explosives Coy.* v. *Roburite Explosives Coy.*, 12 R. P. C. 470, 483, C. A.; *Fawcett* v. *Homan*, 13 R. P. C. 398, 405, 410, C. A.

"It is not a mosaic if (in the later specification) there is a reference to an earlier specification." *Wilson* v. *Wilson Brothers Bobbin Coy., Ltd.*, 28 R. P. C., *per* FLETCHER MOULTON, L.J., at p. 739, C. A.

Of course it is quite immaterial how the patentee has in fact arrived at his invention.

the publication relied on gave such knowledge clearly, so that an intelligent man would realise its full effect (*e*). Again, if the medium of publication was a mere suggestion, such as a statement in a specification or in some little read learned publication, the effect is far less than if the same matter had been generally and practically used and applied (*f*).

Knowledge of equivalents.

The fact that the apparatus or process relied on against the patented invention has been practically employed, and that the scientific laws governing its operation are well known, is most important from this point of view, since it may render new applications or variations obvious which could not otherwise be so. The best examples of this occur in the case of what are called "mechanical equivalents." Knowledge has been accumulated from the earliest times as to the action of certain mechanical devices and the modifications of them which are to be used for certain purposes, and this knowledge is so general that it has become burnt in to the human mind, and is judicially recognised to be so. Thus, for example, in some operation the use of a lever is described in order to increase the power. This description of the use of a lever would at once convey, at any rate to the mind of a skilled man, that a wheel and axle can be used if the power is required to be transmitted to a distance, and that a bell crank lever or a screw may be used if the direction of the power is required to be changed, and the specification of the wheel and axle, bell crank lever or screw for such purpose would in itself be no addition to public knowledge, and consequently no invention, though of course there might be invention in seeing that in the particular problem the power should be applied at a distance or in another direction and in telling the world to do this.

The association of ideas conveyed by the mention of such a piece of knowledge has been termed its "penumbra," and the ascertainment of the extent of this penumbra is all-important in determining the effect of any given publication on the subject-matter of the patent under investigation.

The "mechanical equivalents" are most often spoken of

(*e*) The evidence of the writer as to what he meant would seem clearly irrelevant: *cf. King Brown & Coy.* v. *Anglo-American Brush Corporation*, 9 R. P. C., at p. 315, H. L.

(*f*) See p. 58, *n.* (*q*). *Cf.* also *Bowden's Patent*, 22 R. P. C. at p. 56; *Thomson* v. *Batty*, 6 R. P. C. at p. 98. As to the effect of publication in a provisional specification, see p. 65, *n.* (*x*).

and are the best known; but the same rule applies in other sciences (*g*).

Distinction between common and public knowledge.

There is, therefore, this important distinction between matters of mere public knowledge and matters of common general knowledge such as this knowledge as to mechanical equivalents. While it is in general not legitimate to assume that the craftsman would carry all the various matters of public knowledge in his mind simultaneously, and it is therefore not proper to combine items from different publications so as to destroy the subject-matter of a later patent, matters of common general knowledge are assumed to be always present to his mind, and therefore such matters may be combined with other matters of public knowledge. Thus a reader of any publication may be assumed to interpret or even extend it in view of the common general knowledge of the trade (*h*). While matters of public knowledge can be proved by any of the media hereafter referred to (*i*), matters of common general knowledge must be proved by the evidence of witnesses cognisant of the state of knowledge, or by reference to generally accepted and widely read text-books, etc. Such documents as specifications are not in themselves evidence on this point (*k*).

Effect of publication on skilled reader.

This principle of interpreting a written document as it would appeal to the mind of the skilled reader is carried further so that a statement will not be interpreted in such a way as would make the writer say something which is obviously untrue (*l*), or as to which he could clearly have no knowledge (*m*),

(*g*) *E.g.* Chemistry. Vaughan Williams, L.J.: "The doctrine (of equivalents) does apply in cases where, having regard to the subject-matter, it can be truly asserted that one or two or more chemical substances are well known as producing the same effect on the same subject-matter": see also p. 145. *Andrew's Patent*, 24 R. P. C., at p. 366; and as to electricity, *Gaulard and Gibbs' Patent*, 7 R. P. C. 367, 382, H. L.

(*h*) See in regard to this point p. 123 and p. 132. See also *Gaulard and Gibbs' Patent*, 7 R. P. C. 367, 382, H. L.; *Donnersmarckhutte, etc.* v. *Electrical Construction Coy., Ltd.*, 27 R. P. C. 774, 779, C. A.; *Marconi* v. *British Radio-Telegraph and Telephone Coy.*, 28 R. P. C. 181, 205.

(*i*) See p. 63.

(*k*) *Saccharin Corporation, Ltd.* v. *Chemicals and Drugs Coy., Ltd.*, 17 R. P. C. 28.

The full list of cases on this point will be found in the chapter on LICENSES, p. 246, *n.* (*q*).

But see SUFFICIENCY, p. 94, *n.* (*x*), for a possible exception.

(*l*) *Cf.* SUFFICIENCY, p. 93, *n.* (*s*).

(*m*) Thus where a specification spoke of "organic substances" and gave a number of examples all of which were products of animal or vegetable life, a statement that all "organic products" gave dyes when treated with sulphur, was interpreted as referring only to organic products of the class mentioned and as not extending to the whole series of coal-tar products, both because such interpretation was more consistent with the rest of the specification, and

nor must such statement be interpreted apart from the object and meaning of the specification as a whole. The important point is for the Court to ascertain the effect the alleged publication would have upon a competent man (*o*).

Effect of form of publication.

In estimating the effect of any publication in advancing general knowledge and so anticipating later inventions the Courts consider carefully whether or not the circumstances of such publication were such as would make it likely to affect the process of the particular manufacture, or in other words to attract the attention of practical men (*p*). It is not only that a mere "paper anticipation" consisting of a suggestion to make, say, a particular machine, carries much less weight, and is more critically examined than an actual machine (*q*), but the utility or lack of utility of what has been proposed or done is most important, since a machine or process that does not work practically or is less efficient than previously existing methods, or a publication which contains statements mixed with matters that are false, not only may fail to lead in the direction of a practical development, but may actually lead

also because a skilled reader would reject the other interpretation as involving a statement obviously beyond the writer's knowledge. *Vidal Dyes Syndicate, Ltd.* v. *Levinstein*, 29 R. P. C. 262, C. A.

Where from the specification as a whole it seems that the writer was ignorant of certain apparatus, statements in it will not be interpreted as involving the use of such apparatus. *Marconi* v. *British Radio-Telegraph Coy., Ltd.*, 28 R. P. C. 181, 209.

(*o*) *British Westinghouse Coy.* v. *Braulik*, 27 R. P. C. 209, 224. See chapter on CONSTRUCTION.

(*p*) "As for annals, in particular, the annual register of science, one knows that in every country every year thousands of facts or supposed facts find their way into them coming like shadows so departing without leaving any permanent traces behind them." *Von Heyden* v. *Neudstadt* (1880), 50 L. J. (CH.) at p. 126, C. A.

(*q*) "I think it is very material in considering whether there is any ingenuity or invention in applying an article to a new subject to consider whether the article is only described in print or whether it is actually to be seen or handled, because when a thing is to be seen—when it exists and is to be handled—it may require a very much less degree of invention to make it into a new article than if it is only seen in description or in drawings." *American Braided Wire Coy.* v. *Thomson*, 5 R. P. C., *per* COTTON, L.J., at p. 123.

"When anticipation is simply by a publication, not by a machine put in use, that publication should be examined somewhat critically." *Ellington* v. *Clark*, 5 R. P. C. 141, *per* KAY, L.J. : *cf.* also *Stoner* v. *Todd* (1876), 4 Ch. D. 58.

In *Otto* v. *Linford* (1881), 46 L. T. 35, the Court of Appeal held that the later invention must be described in the earlier publication that is held to anticipate it. It is not sufficient that if a machine had been made according to such description, it would have produced a result, not to be gathered from the description, which would have disclosed such invention. See also *Jandus Arc Lamp Coy.* v. *Arc Lamp Coy.*, 22 R. P. C. 296; *Patent Exploitation, Ltd.* v. *Siemens Brothers, Ltd.*, 20 R. P. C. 242, C. A.; *Evans* v. *Hoskins*, 24 R. P. C. 517, 526, C. A.; *Vorwerk* v. *Evans*, 7 R. P. C. 172.

away from it by reason of the failure of the machine or of the methods advocated by the publication. In general it may be said that a useless machine or process, in the sense of one that did no useful work, would not be able to destroy a later useful invention, and that any distinction would be sufficient to prevent anticipation provided that the different part was an essential part of the later machine, so that the claim did not cover the original form (*r*).

(*r*) "The publication was not likely to lead a manufacturer or practical chemist to think of doing what is described in the specification. It would, on the contrary, effectually discourage any attempt in that direction." *Von Heyden* v. *Neudstadt* (1880), 50 L. J. (CH.) at p. 126.

"The first patentee so far from showing the way to success left his wrecked barque as a warning to others who might be thinking of pursuing the same channel." *Andrews' Patent*, 24 R. P. C., *per* FARWELL, L.J., at p. 371. See also *Hill* v. *Evans* (1862), 31 L. J. (CH.) 457, 465; *Murray* v. *Clayton* (1872), 7 Ch. App. 570; see *contra Beavis* v. *Rylands*, 17 R. P. C. 704, 711, C. A.; *Thomson* v. *Macdonald*, 8 R. P. C. 5, where it seems to be suggested that carelessness does not prevent a publication affecting subject-matter; *cf.* also *Singer* v. *Rudge*, 11 R. P. C. 463.

"Now I am not aware of any principle or authority upon which the exhibition of a useless machine, which turns out a failure, can be held to affect the right of a patentee who has made a successful machine, although there may be a degree of similarity between some of the details of the two machines." *Murray* v. *Clayton* (1872), 7 Ch. App., *per* JAMES, L.J., at p. 581.

In this case, in which the patent was for a brickmaking machine, the Court held that where the alleged anticipation, although it would make bricks, involved more labour than the process of making them by hand, it must be treated as useless and held it was therefore not an anticipation. They also held that the fact that the defendant had tried the alleged anticipating machine and abandoned it for the plaintiff's was strong evidence that it was not an anticipation. On the last point, *cf. Deeley's Patent*, 13 R. P. C. 581, H. L., and *Siddell* v. *Vickers*, 7 R. P. C. 292, H. L.

BRETT, J., directed the jury as to alleged anticipation by a machine that the question was whether such machine would do the work more or less badly: "Because in my opinion if it would not, I do not say perfectly, but if it would not do the work ordered of it, it was not an invention at all or a machine in a business sense. . . . I put the words 'more or less badly' because I do not think that if the only defect in the machine was some defect in the levers which any workman could find out at once, if it would make a nut, though badly, that would not prevent its being a machine." The jury having found for the plaintiff, a new trial was refused: *Barlow* v. *Baylis* (1875), Griff. at p. 46.

"Where defendant states a prior anticipation ten years ago and cannot prove that it has been of the slightest utility at all, it certainly makes a judge look carefully into the anticipation to see whether it is in reality an anticipation of the patent which is of utility." *Duckett* v. *Whitehead*, 12 R. P. C., *per* SMITH, L.J., at p. 382.

In *Minter* v. *Mower* (1835), W. P. C. 123, the Court were of opinion that had the claim been properly defined the patent would not have been anticipated by a chair which, though it embodied this principle of the plaintiff's invention, had so many useless and additional parts that the principle would not be appreciated from seeing the chair.

So, too, a prior specification, which was held in one case not to anticipate because unworkable, was held to anticipate in a later case on proof that it would work. *British Motor Traction Coy.* v. *Sherrin*, 18 R. P. C. 265; *Same* v. *Friswell*, 18 R. P. C. 497.

A similar result occurred in *Shaw* v. *Jones*, 6 R. P. C. 328; *Same* v. *Day*, 11 R. P. C. 185.

Again the form of a paper publication is important, and where it merely forms part of a mass of ill-digested suggestions so that it would be likely to be rejected by any practical man little attention is paid to it unless it contains the actual matter of the later patent (*u*). It is in fact treated as adding nothing to public knowledge. These remarks apply with special force to publications of many years back which are liable to have passed into "the limbo of forgotten things" (*x*).

Anticipation by written document.

For a single publication to constitute an anticipation the "information as to the alleged invention given by the prior publication, must be for the purposes of practical utility equal to that given by the subsequent patent" (*y*). Whatever, therefore, is essential to the invention must be contained in the prior publication, and if specific details are necessary for the practical working and real utility of the alleged invention they must be found in substance in such publication (*z*). But this does not mean that the same rules of criticism are to be applied to a publication put forward as an anticipation, as would be applied to determine the question of the sufficiency of a

In *Hallett* v. *Hague* (1831), 9 L. J. (O. S.) (K. B.) 283, TENTERDEN, C.J., put the question to the jury whether the alleged anticipation was of any practical utility. See also *Andrews' Patent*, 24 R. P. C., *per* FARWELL, L.J., at p. 271, C. A.; *Edison and Swan Coy.* v. *Woodhouse* (1st action), 4 R. P. C. 98; *Heidemann* v. *Smokeless Powder Coy.*, 15 R. P. C. 320; *Steel Railway Journal Box Coy., Ltd.* v. *Hurst Nelson & Coy., Ltd.*, 26 R. P. C. 493, O. H.

Prior publications may also lead away by denouncing the idea as impracticable; *cf. British Liquid Air Coy.* v. *British Oxygen Coy.*, 25 R. P. C. 601, C. A., or by selecting methods or substances less convenient or more expensive than those chosen by the patentee and so suggesting that the simpler or cheaper ones will not do; *cf. Osram Lamp Works* v. *Electric Lamp Coy.*, 29 R. P. C. 423; *Unwin* v. *Heath* (1855), 5 H. L. C. 505, 543.

Flour Oxidising Coy. v. *Carr*, 25 R. P. C. 428, 454.

(*u*) *Incandescent Gas Light Coy.* v. *De Mare Incandescent Gas Light System*, 13 R. P. C. 300, 323; *Betts* v. *Menzies* (1862), 10 H. L. C. 117, 134; *Murray* v. *Clayton*, *supra*; *Molassine* v. *Townsend*, 23 R. P. C. 27; *cf.* also *Bowden's Patent*, 22 R. P. C. at p. 56.

But a mere mistake in theory does not necessarily prevent a prior publication being an anticipation. *Andrews' Patent*, 24 R. P. C., *per* VAUGHAN WILLIAMS, L.J., at p. 356. See also *Thomson* v. *Macdonald*, 8 R. P. C. 5.

(*x*) *Pirrie* v. *York Street Flax Spinning Coy.*, 11 R. P. C., *per* FITZGERALD, L.J., at p. 445, C. A. Ir.; *Incandescent Gas Lighting Coy.* v. *De Mare Incandescent Gas Light System*, *supra*.

(*y*) *Hill* v. *Evans* (1862), 31 L. J. (CH.) at p. 463.

(*z*) *Hill* v. *Evans*, *ubi supra*. See also *Betts* v. *Neilson* (1871), 3 Ch. App. 429, 457; *Muntz* v. *Foster* (1844), 2 W. P. C. 93; *Von Heyden* v. *Neustadt* (1881), 50 L. J. (CH.) 126, 128, C. A.; *Edison and Swan Coy.* v. *Woodhouse* (2nd action), 4 R. P. C. 99, 106; *Bray* v. *Gardner*, 4 R. P. C. 400; *Haslam* v. *Hall*, 5 R. P. C. 1; *Cassel Gold Extracting Coy.* v. *Cyanide Gold Recovery Syndicate*, 12 R. P. C. 232, 254, C. A.; *Hookham* v. *Johnson*, 14 R. P. C. 562; *Evans* v. *Hoskins*, 24 R. P. C. 517, 526, C. A.

specification. In the latter case the criterion is whether the description is sufficient to enable the ordinary workman of average competence to carry out the invention, while on the question of publication it would be sufficient if the earlier document gave sufficient information to enable a skilful master to give instructions to a workman to carry out the invention (*a*), but it would probably not be sufficient to say that the earlier publication would have suggested the later idea to the mind of a Lord Kelvin or an Edison who "could invent for himself." In certain cases a drawing alone may constitute an anticipation (*b*), or possibly even a mere title (*c*), but only if this makes the whole invention clear (*d*). If, however, the publication relied on is such that the competent reader would see what had to be done, it may not matter that certain parts are omitted which he would know he must add (*e*).

The earlier publication must give the knowledge required, it is not sufficient that it merely gives the means of attaining the knowledge (*f*), or that when the later invention is known it can be seen that it could have been arrived at by the means shown in the earlier specifications (*g*). Nor where a patentee has first shown how to do a thing do the Courts look favourably on suggestions that by modification of former machines,

(*a*) *King Brown* v. *Anglo-American Brush Corporation*, 9 R. P. C. 313, 320, H. L.; *Van Berkel* v. *Simpson*, 23 R. P. C. 257, 258, O. H.; *Young* v. *Rosenthal*, 1 R. P. C. 20; *Philpott* v. *Hanbury*, 2 R. P. C. 33, **43**; *Thomson* v. *Batty*, 6 R. P. C. 84, 98; *Moser* v. *Marsden*, 13 R. P. C. 24, 30, H. L.

In *Plimpton* v. *Spiller* (1877), 6 Ch. D. 412, JESSEL, M.R., adopted the test of whether the directions were sufficient for an intelligent workman. A similar view was taken in *Rucker* v. *London Electric Supply Corporation*, 17 R. P. C. 279, 293.

(*b*) *Electric Construction Coy.* v. *Imperial Tramway Coy.*, 17 R. P. C. 537, 550, C. A.; *Herrburger Schwander et Cie* v. *Squire*, 6 R. P. C. 194, C. A.

(*c*) See *Thermos, Ltd.* v. *Isola, Ltd.*, 27 R. P. C. 388, 399; but see *contra*, *British Liquid Air Coy., Ltd.* v. *British Oxygen Coy., Ltd.*, 25 R. P. C. 610, C. A.; 26 R. P. C. 509, H. L.; and *Lewis's Patent*, 14 R. P. C. 24.

(*d*) In many cases, drawings with or without short descriptions have been held insufficient. See *Plimpton* v. *Spiller* (1877), 6 Ch. D. 412, C. A.; *Bray* v. *Gardner*, 4 R. P. C. 400.

In *Defries* v. *Sherwood*, 14 R. P. C. 313, where the alleged anticipation was a drawing of a lamp to scale and a lamp so made to scale would have been useless, the patent was upheld. In *Watson, Laidlaw & Coy., Ltd.* v. *Potts Cassel and Williamson*, 26 R. P. C. 349, I. H., it was held that a drawing of what seemed intended for a cylindrical bearing, but which, probably by a draftsman's error, had a slight inclination, was not an anticipation of a conical bearing.

(*e*) See *Muirhead* v. *Commercial Cable Coy.*, 12 R. P. C. 39, C. A.

(*f*) *Betts* v. *Wilmot* (1870), 6 Ch. App. 239; *Otto* v. *Linford* (1881), 46 L. T. 35, C. A.; *American Braided Wire Coy.* v. *Thomson*, 5 R. P. C. 113, 123, C. A.

(*g*) *Incandescent Gas Lighting Coy.* v. *De Mare Incandescent Gas Light System*, 13 R. P. C. 300, 323; *Bovill* v. *Goodier* (1865), L. R. 2 Eq. 198; *Bovill* v. *Crate* (1868), Griff. N. C. 45, 47.

never suggested at the time, the later invention could be achieved (*h*).

Reading publication in light of later knowledge.

The question of how far knowledge subsequent to the date of the alleged publication can be used to extend its effect is a very difficult one. Probably it may be said the common general knowledge up to the time of the application for the later patent may be applied to extend the scope of an anticipation to the same extent as the common general knowledge of an earlier date (*i*), but, as has been observed above, it is always a question whether the publication has that degree of clearness and certainty which would enable a competent man to see with certainty what details might be varied, on the general principles with which he was acquainted, without departing from the object sought, and it is always a pertinent criticism that this former publication, even with the advance of general knowledge, had not in fact led to the later result (*k*). Of course, the technical terms contained in the publication must be given the meaning which they had at the date of such publication (*l*). Also all knowledge, either general, or as to the meaning of the prior publication, acquired since the date of application for the later patent must be carefully excluded (*m*).

(*h*) Cases of this class are :—

Starting device for motors, which depended on the checking of the rate of flow of the gas, not anticipated by an igniting device depending on a similar principle, but which had no automatic closing valve and could not have been used as a starting device without the provision of a separate gas supply, which had never been suggested. *British Motor Syndicate* v. *Andrews*, 16 R. P. C. 577, 593.

An improved gig-mill in which rollers had a motion which was both independent and variable, was held not to be anticipated by an earlier mill in which the same effect could have been produced, had a part which was normally fixed, but was rotatable for cleaning purposes, been loosened and independently driven. *Moser* v. *Marsden*, 13 R. P. C. 24, H. L. See also *Watling* v. *Stevens*, 3 R. P. C. 42; *Incandescent Gas Lighting Coy.* v. *De Mare Incandescent System*, *supra*; *Taylor* v. *Annand*, 17 R. P. C. 126, 136, C. A.; *Gammons* v. *Battersby*, 21 R. P. C. 322, 332, C. A.; *Gramophone Coy.* v. *Ulman*, 23 R. P. C. 752, C. A.; *British Westinghouse Coy.* v. *Braulik*, 27 R. P. C. 209, 230, C. A.; *Marconi* v. *British Radio-Telegraph Coy.*, 28 R. P. C. 181, and p. 97, *n.* (*g*).

In *Gramophone Coy. Ltd.*, v. *Ruhl*, 28 R. P. C. 20, the C. A. criticised comparisons of patented instruments with machines purporting to represent an earlier form, but obviously suggested by the later patent.

(*i*) *King, Brown & Coy.* v. *Anglo-American Brush Corporation*, 9 R. P. C. 313, 320, H. L.; *Betts* v. *Wilmot* (1870), 6 Ch. App. 239; *Betts* v. *Neilson* (1871), 3 Ch. App. 429; *Marconi* v. *British Radio-Telegraph Coy.*, 28 R. P. C. 181, 205.

(*k*) *Cf. Dowling* v. *Billington*, 7 R. P. C. 191, 204, C. A. Ir.; *Shrewsbury and Talbot* v. *Stercxs*, 13 R. P. C., *per* SMITH, L.J., at p. 53.

(*l*) *Betts* v. *Menzies* (1862), 31 L. J. (Q. B.) 233 H. L.

(*m*) *Lewis's Patent*, 14 R. P. C. 24; *Ehrlich* v. *Ihlee*, 5 R. P. C. 452, C. A.; *Bray* v. *Gardner*, 4 R. P. C. 400, 406;

Question of anticipation one of fact.

It is probably the sounder view that it is a question of fact whether even a printed publication describes the later invention, and would if the case were tried by a jury be a question for them (*n*).

A clumsy infringement might not anticipate.

In pursuance of the doctrine that a useless machine or suggestion for a machine forms no addition to public knowledge, the Courts have held that what might have been considered as a clumsy infringement of a patent had it been produced after the date of the grant is not necessarily an anticipation, since it may not disclose the real invention (*o*).

Media of Publication

Publication must have been within realm.

The publication, whether in a document or by user, which is relied on as anticipating a patent must be a publication within the Realm (*p*).

Publication by printed document.

One of the commonest methods of publication is by means of a printed document publicly exposed or circulated in this country (*q*). It would seem, on comparison with the authorities, that the publication must be such that the reasonable inference is that the matter has actually been read by and

Vidal Dyes Syndicate v. *Levinstein*, 29 R. P. C. 277, C. A. See also *Unwin* v. *Heath* (1855), 5 H. L. C. 505, 523; and p. 123, *n.* (*u*).

(*n*) Lord WESTBURY held that it was for the Court to explain to the jury the meaning of the various specifications according to the meaning the jury may find attached to the technical terms, but it is then for the jury to say whether the inventions disclosed in such specifications are identical. The remarks of the Lord Chancellor in *Bush* v. *Fox* (1856), 5 H. L. C. 708, as to its being in the power of the Court to themselves decide on such identity were, in his opinion, merely obiter. *Hills* v. *Evans* (1862), 31 L. J. (CH.) 457. See also *Hills* v. *London Gas Coy.* (1860), 29 L. J. (EX.) 409, and *Betts* v. *Menzies*, *supra*.

GROVE, J., left it to the jury to decide whether a statement in a specification that the patent was for "seams run transversely across stays instead of vertically or obliquely" would indicate to a competent man that oblique seams could be used. *Young* v. *Rosenthal*, 1 R. P. C. 29.

In *Booth* v. *Kennard* (1856), 26 L. J. (EX.) 23, the Court entered judgment for defendant after a verdict for the plaintiff, holding that invention was identical with that described in a prior specification.

(*o*) This view was first suggested by WOOD, V.C., in *Daw* v. *Eley* (1865), 14 W. R. 126. It was approved in *Murray* v. *Clayton* (1872), 7 Ch. App. 570, C. A., and also in *Pneumatic Tyre Coy.* v. *East London Rubber Coy.*, 14 R. P. C. 77. See also *Hopkinson* v. *St. James's Electric Lighting Coy.*, 10 R. P. C. 46, 60, and *Watling* v. *Stevens*, 3 R. P. C. 51.

(*p*) *Rolls* v. *Isaacs* (1878), 19 Ch. D. 268; *Beard* v. *Egerton* (1846), 15 L. J. (C. P.) 270.

(*q*) It was recognised, certainly as early as Arkwright's case, that a description in a book, in that case a technical dictionary, anticipated a subsequent patent, and such is now generally recognised. The decision to the contrary in *Stead* v. *Anderson* (1841), W. P. C. 134, 157, cannot be regarded as of any authority. See also *Hill* v. *Thomson and Foreman* (1818), W. P. C. 235, 247.

become known to some member of the public, and it is not sufficient merely to show that persons might have had access to it (*r*). There are, however, a class of documents, such as British complete specifications, which are held to be published so soon as the public have acquired the right to see them; whether or not any member of the public has actually seen them (*s*).

(*r*) *Cf. Plimpton* v. *Malcolmson* (1876), 3 Ch. D. 531; *Plimpton* v. *Spiller* (1877), 6 Ch. D. 412, C. A. The dicta of the Court of Appeal as to the necessity of the publication becoming known to "a sufficient number of people" (6 Ch. D. 434) or becoming part of the "common knowledge," would seem too wide in view of the later cases, especially *Pickard* v. *Prescott, infra.*

The following are examples of cases where publication was held to be proved :—

Where a German specification had been in the Patent Office Library for forty days before the date of application, and was duly indexed. *Harris* v. *Rothwell*, 4 R. P. C. 232, C. A.

Where a foreign book was sent to a bookseller in this country and four copies sold. ROMILLY, M.R., expressed opinion that the exposure in the shop would have been enough alone without proof of sale. *Lang* v. *Gisborne* (1862), 31 L. J. (CH.) 769.

Where a book was in the British Museum Library, was indexed, though only under author's name, and was referred to in a later (apparently foreign) work. *Heidemann* v. *Smokeless Powder Coy., Ltd.*, 15 R. P. C. 305.

Where the publication of an electrical discovery was in an electrical technical paper received at the Patent Office and Institute of Civil Engineers. *United Telephone Coy.* v. *Harrison* (1883), 21 Ch. D. 720.

Where a publication in a technical paper had been in the Patent Office Library two days before the application for the patent. *Rucker* v. *London Electric Supply Corporation, Ltd.*, 17 R. P. C. 279, 295.

Publication of an improvement in eyeglasses in an optical paper sent to a regular subscriber in this country held sufficient for presumption that he had read it within a day or two of the time of receipt though, *semble*, this might have been rebutted by proof that he had not so read it. *Pickard* v. *Prescott*, 9 R. P. C. 195, H. L.

Where a large number of circulars were sent to an agent in England for distribution, although it was not proved that they were sent out. *Jensen* v. *Smith*, 2 R. P. C. 249; see also *Bovill* v. *Goodier* (1871), Griff. N. C. 47.

The following are cases in which publication not held to be proved :—

Where the only copy of a book was one in the British Museum Library in a room to which the public had no access, and it was only indexed under the author's name in the British Museum catalogue, although it had also been indexed under its subject in a bookseller's catalogue. *Otto* v. *Linford* (1881), 46 L. T. 35; see also *Otto* v. *Steel*, 3 R. P. C. 109.

Where a book had been sent to the Patent Office, but was kept in a room to which the public did not go and owing to an error was omitted from the index. *Plimpton* v. *Malcolmson* (1876), 3 Ch. D. 531; *Plimpton* v. *Spiller* (1877), 6 Ch. D. 412, C. A.

The question of when publication may be presumed to have taken place is also a question of fact: *cf. Harris* v. *Rothwell, supra.*

(*s*) *Fox* v. *Astrachans, Ltd.*, 27 R. P. C. 377. Here it was held that publication dated from acceptance. See also *Hill* v. *Evans* (1862), 31 L. J. (CH.) 463.

In *Ellington* v. *Clark*, 5 R. P. C. 319, C. A., a specification accepted the same day as the application for the patent in question was held to be an anticipation, but the point does not seem to have been fully argued.

In other respects, the publication of a British specification has the same effect as that of any other document. *Hills* v. *London Gas Co.* (1860), 29 L. J. (EX.) at p. 420.

It would seem that a similar rule would apply to a "Convention" specification open to inspection under

Where the publication is in a language understood by persons in England the effect is the same as if it were in English (*t*), though doubtless the fact of the document being in a language little known here would properly be taken into account as affecting the probability of its having been read. Documents in foreign languages.

These considerations only apply to documents intended for the public and coming to this country in the ordinary course. When a document is sent privately to this country and is kept secret, or only used for experimental purposes, the position is the same as where an invention is made by a person here and never published, *i.e.* it does not affect a later patent (*u*). Private documents.

It is now provided by statute that in the case of any patent applied for on or after the first day of January, 1905, the invention 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 patent, or of its publication in a provisional specification of any date not followed by a complete specification (*x*). There have been no decisions throwing light on the application of these provisions. Statutory exceptions as to publication.

So too a verbal communication made in this country not confidentially is a publication (*y*). Verbal communications.

With regard to a confidential communication this in itself Confidential communications.

sect. 91. *Parsons and Stoney's Application*, 27 R. P. C. 491, L. O., and see *International Harvester Coy. of America* v. *Peacock*, 25 R. P. C. at p. 773, P.C. As to other documents, see *Patterson* v. *Gas Light and Coke Coy.* (1878), 3 A. C. 239 (Report of Commissioners). See also *Harris* v. *Rothwell*, 4 R. P. C., *per* LOPES, L.J., at p. 232, C. A.

(*t*) *Harris* v. *Rothwell*, 4 R. P. C. 225, C. A.; *Lang* v. *Gisborne* (1862), 31 L. J. (CH.) 769. See also *Harteloop's Patent* (1836), W. P. C. 553, and see comments thereon by LINDLEY, L.J., in *Harris* v. *Rothwell*, 4 R. P. C. at p. 231, C. A.; *Rucker* v. *London Electric Supply Corporation, Ltd.*, 17 R. P. C. 279, 295.

(*u*) *Per* BAILEY, J., in *Lewis* v. *Marling* (1829), W. P. C. 496, but a form of invitation for tenders sent to two contractors in this country was held to be published: *Ludlow* v. *Jenkins*, 20 R. P. C. 179.

(*x*) Sect. 4 (1). The Act does not deal with the case where something has been published in a provisional specification but abandoned in the complete, and matter so published might still anticipate. The Courts have generally been reluctant to attach much weight to such a publication since the abandonment by the inventor himself is likely to prevent others paying much attention to it: *cf. Stoner* v. *Todd* (1876), 4 Ch. D. 58.

Prior to the Act there were several cases where the Courts held a provisional specification to be an anticipation. See *Davis* v. *Feldman*, 1 R. P. C. 193, C. A.; *Lawrence* v. *Perry*, 2 R. P. C. 179, 187; *Gaulard and Gibbs' Patent*, 7 R. P. C. 367, 387, H. L.

(*y*) *E.g. Humpherson* v. *Syer*, 4 R. P. C. 407, 414, C. A. No communication made abroad can affect a British patent. See TRUE AND FIRST INVENTOR, p. 74.

was never held to be publication and a broad view has been taken as to what establishes a relation of confidence (*z*).

Where, however, a communication is made to some person who is a trustee for the public and whose duty it is to use the knowledge for the public benefit, the communication cannot be confidential (*a*).

Publication without knowledge or consent of inventor.

The Act also provides that a patent shall not be held to be invalid by reason only of the publication of the invention if the patentee shows that the matter published was derived from him, that the publication was without his knowledge and consent, and that he applied for a patent with all reasonable diligence on learning of such publication (*b*).

Publication by exhibition of article.

In many cases the publication is effected by the exhibition or use of the article in question. If the article clearly shows the means of manufacture, and if it is not shown as a pure experiment (*c*), such publication is generally complete and effective, but cases arise where the article has been manufactured abroad, so that the manufacture was not a prior user within the realm, and the means of manufacture are not apparent from the manufactured article. The law in such cases would seem to be that if the article has passed into the hands of a member of the public, and if analysis would have shown the means of manufacture, then the publication is effective, but not otherwise (*d*). In

(*z*) *Cf. Pilkington* v. *Yeakley*, 18 R. P. C. 459. In the opinion of FRY, L.J., some evidence as to communication being confidential is necessary. *Humpherson* v. *Syer*, 4 R. P. C. 407, 414, C. A.

(*a*) *Patterson* v. *Gas Light and Coke Coy.* (1878), 3 A. C. 239.

(*b*) Sect. 41 (2). Before the Act it was held that if a communication had been made so that some person in this country not under an obligation of secrecy knew of the invention, this was a publication. *Humpherson* v. *Syer*, 4 R. P. C. 407, C. A. In Scotland, however, a different view prevailed: *Templeton* v. *Macfarlane* (1847), 2 S. X. 4. The publication of a foreign specification of the inventor containing *inter alia* an account of the invention is within the section. *International Harvester Coy. of America* v. *Peacock*, 25 R. P. C. 765, P. C.

If, as the result of such communication, some other person had applied for a patent, this section would not afford a ground of opposition, *e.g.* if the communication were made abroad, nor any answer to a plea of prior grant. Nor, *semble*, would it help if a commercial user of the invention had been started here so that others were using the invention at the time of the grant.

(*c*) See pp. 69 *et seq.*

(*d*) See *per* ROMER, J., in *Miller's Patent*, 15 R. P. C. 205, and also *Hancock* v. *Somervell* (1851), 39 Newton Law Journal 158. In *Sunlight Incandescent Coy.* v. *Incandescent Gas Light Coy.*, 14 R. P. C. 757, WILLS, J., seemed to take the question to be whether others in fact knew the constituents; but here there had only been exhibition and not sale.

In *Gill* v. *Coutts*, 13 R. P. C. 128, the Inner House held that if there had been public sale it did not matter that the constituents were unknown. Here, however, the manufacture had been by the defendant and in England. The same view seems to have been held by GIBB, J., in *Wood* v. *Zimmer* (1815), W. P. C. 44. Here, again, the prior manufacture was in

the case of a mechanical invention, where the details of manufacture can be completely seen by opening the article, the fact that such an article has been accessible to members of the public would seem to be sufficient to constitute publication (*dd*). There are special provisions as to publication of inventions during the holding of certain industrial exhibitions (*e*).

Prior User

Prior user. Prior user of the invention is another medium of publication, and this may also in certain cases defeat a patent quite apart from the question of publication (*ee*). It is important to remember this double *rôle* of a prior user, especially in considering the cases dealing with experimental user.

Existing manufacture. If the manufacture is being practised at the date of the grant, whether secretly or openly, the grant is not for a new manufacture, and the patent is bad. This applies equally whether such manufacture is being practised by the patentee or others (*f*).

England. See also *Spilsbury* v. *Clough* (1842), W. P. C. 259, and note thereto; *McLay* v. *Lawes*, 22 R.P.C. 199. It must be remembered that patents were primarily rewards for the introduction of new *industries* into the realm, and the fact that the products have been imported does not prevent the industry from being a new one here.

There is one difficulty in regard to this class of case which has not been discussed by the Courts. If the patent is valid the continued use of articles within the claim would *primâ facie* be an infringement, even if these had been imported before the date of the patent, and if this is so, the continued use of such articles would be interfered with were the patent upheld. Probably the view taken would be that the Courts have held user of imported article to be an infringement for the purpose of ensuring the patentee the full value of his monopoly of the right to manufacture, and as this is not affected by the use of articles obtained before the date of the monopoly, this would not be held to be an infringement.

(*dd*) *Cf. Carpenter* v. *Smith* (1841), W. P. C. 530; *Taylor's Patent*, 13 R. P. C. 482; *Lifeboat Coy.* v. *Chambers*, 8 R. P. C. 418; *Stohwasser* v. *Humphreys*, 18 R. P. C. 116; *Poulton's Patent*, 23 R. P. C. *per* VAUGHAN-WILLIAMS, L.J., at p. 560; *Brereton* v. *Richardson*, 1 R. P. C. 165.

(*e*) See s. 45.

(*ee*) See *Robertson* v. *Purdey*, 24 R. P. C. 291.

(*f*) See 21 Jac. c. 3, s. 6. As to prior user by patentee, see *Betts* v. *Menzies* (1862), 1 E. & E., *per* CAMPBELL, C.J., at p. 1008; *Germ Milling Coy.* v. *Robinson*, 3 R. P. C. 399, 408, C. A.; *Hoe* v. *Foster*, 16 R. P. C. 33, C. A.; *Poulton's Patent*, 23 R. P. C. 183 and 560, C. A.; *Bentley* v. *Fleming* (1844), 1 Car. & Kir. 587. A contrary view was taken by the Scotch Courts in *Roebuck* v. *Stirling*, 8 English Reports, p. 174, *n.* As to user by others, see *Tennant's Case* (1795), W. P. C. 125, *n.*; *Hill* v. *Thompson* (1818), W. P. C. 229, 240; *Hutchinson* v. *Patullo*, 5 R. P. C. 351.

The Courts have, in many cases, said that prior secret user by the inventor invalidates a patent, the reason generally given being that otherwise the patentee would get a longer monopoly than fourteen years. This reason hardly seems satisfactory, since the only limitation in the Statute is that the monopoly given by the *patent* shall not be more than fourteen years from the date of the grant; and, further, the words "which others shall not use" would seem to except the case of user by the patentee. This ground of invalidity would seem to be founded not on the Statute, but on some doctrine of the Common Law the origin of which is lost.

Abandoned manufacture.

The question of when a user in secret which has never been published, and which has been abandoned before the date of the grant, invalidates such grant is one as to which there has been no clear decision. Probably the true test is, has the manufacture been so completely abandoned that but for the patentee's discovery it would in all probability have never been heard of again ? (*g*).

Prior user must not have been merely fortuitous.

It has been suggested and would seem to be good law that a prior user in order to defeat a patent must have been a user as a manufacture and not a mere fortuitous user of the subsequent invention, in which the person using it gained no knowledge of the advantages of the invention, and which would not have led to its further use (*h*). Some of the older rulings were to the effect that there must have actually been a user "in trade" (*i*), and even in the same trade (*k*), but it seems doubtful if these would be followed.

User amounting to publication.

A user in the presence of the public, or a user in the presence of workmen without any special or implied injunction to secrecy, and for ordinary manufacturing or trade purposes is such a public prior user as will defeat a patent even if such use is abandoned (*l*).

The lapse of time since the user occurred does not alter its effect, except possibly if the user was so long ago that it may be said to be forgotten (*m*), but of course strong evidence is required

(*g*) See *Lewis* v. *Marling* (1829), W. P. C. 490, 492, *n*. See also 4 Newton London Journal 146, 2nd Ser.; Godson on Patents, 2nd Edition, p. 43. In *Tennant's Case* (1795), W. P. C. 125 *n*., the user seems to have continued up to the date of the grant.

In the case of *Wright's Patent* (1843), W. P. C. 736, an extension of term was granted for a patent which admittedly was for the rediscovery of a process known in the Middle Ages but since lost.

(*h*) *Per* BLACKBURN, J., in *Harwood* v. *G. N. Ry. Coy.* (1850), 29 L. J. (Q. B.) at p. 202. (See also judgment of Exchequer Chamber in same case (1852), 31 L. J. (Q. B.) at p. 200.) *Cf. Rockcliffe* v. *Priestman*, 15 R. P. C. 155. See also WEBSTER's note to *Spilsbury* v. *Clough* (1842), W. P. C. 259, and cases there referred to.

(*i*) *Smith* v. *Davidson* (1857), 2 S. XIX 691, O. H.

(*k*) *Wilson* v. *Black* (1847), 2 S. X. 1.

(*l*) *Household Coy.* v. *Neilson* (1843), 9 C. & F. 788, 801; *Humpherson* v. *Syer*, 4 R. P. C. 407, C. A.; *Lifeboat Coy.* v. *Chambers*, 8 R. P. C. 418, I. H.; *Wesley Richards* v. *Perks*, 10 R. P. C. 181; *Haggenmacher's Patent*, 15 R. P. C. 437; *Haggenmacher* v. *Watson*, 14 R. P. C. 631, C. A.; *McLeay* v. *Lawes*, 22 R. P. C. 199; *Gramophone Coy., Ltd.* v. *Ruhl*, 27 R. P. C. 629. In the last case, a trial in the presence of workmen not pledged to secrecy was held to be publication; see also *Humpherson* v. *Syer*, *supra*.

The ruling in *Jones* v. *Pearce* (1832), W. P. C. 121, would seem contrary to this, but must be taken to have been overruled by *Household Coy.* v. *Neilson*, *supra*. See as to this *Tangye* v. *Scott* (1866), 14 W. R. 386. See also on this point *Lewis* v. *Marling* (1829), W. P. C. 490.

(*m*) *Cf. Dick* v. *Tullis*, 13 R. P. C. 149; *Household Coy.* v. *Neilson*, *supra*.

to establish an ancient user (*n*). It may be, however, that if a short user long ago abandoned is set up the onus is on the defendant to show that it was not an abandoned experiment (*o*).

Manufacture and sale constitute prior user.

It has been said that if even a single article has been manufactured and sold in the ordinary way of trade, this would probably establish a fatal prior user or publication (*p*), and in fact comparatively small sales have been held sufficient to invalidate a patent. Apart from sale a use for the purposes of trade by the patentee or others may constitute a prior user even if there is no publication (*q*). Mere manufacture for the purposes of subsequent sale does not, however, constitute a prior user if the articles are not offered for sale before the date of the patent, and the user is kept secret for the purposes of obtaining a patent, whether such manufacture be by the patentee (*r*) or others (*s*). The exhibition of an article for the purpose of obtaining orders or seeing how the trade like it is generally held such use in trade as amounts to publication (*t*).

Secret experiment no anticipation.

It has from a very early date been held that mere experiment never published to the world is not publication (*u*), and generally it may be said that if the user is experimental (*x*) and the inventor has done nothing in the course of the experiment

(*n*) *Dick* v. *Tullis*, *supra*; *Haggenmacher* v. *Watson*, *supra*; *Morgan* v. *Windover*, 4 R. P. C. 417; 5 R. P. C. 195; 7 R. P. C. 131, H. L.

(*o*) *Morgan* v. *Windover*, *supra*, *per* KEKEWICH, J., BOWEN and COTTON, L.JJ. The point seems to have been doubted in the H. L.

This applies particularly where the patent has been very successful. *Robertson* v. *Purdey*, 24 R. P. C. 299; *Dick* v. *Tullis*, *supra*.

(*p*) *Morgan* v. *Seward* (1837), W. P. C. 170; *Losh* v. *Hague* (1839), W. P. C. 200; *Lister* v. *Norton*, 3 R. P. C. 199; *Young* v. *Rosenthal*, 1 R. P. C. 29; *Haskell Golf Ball Coy.* v. *Hutchinson*, 25 R. P. C. 194, but *cf. contra Elliot* v. *Ashton* (1840), W. P. C. 222, where COLTMAN, J., left it to the jury to say whether the sale of 70 gross of a certain button proved its public use and they found it did not, and *Fellowes* v. *Brookes*, 27 R. P. C. 103, where the manufacture and sale of 2 cwt. of nuts by a person not the patentee, was held to be a mere experiment. See also *Crampton* v. *Patents Investment Coy.*, 5 R. P. C. 382, 403; but the C. A. here seem to have considered that the judge did not believe the evidence as to publication: see 6 R. P. C. 287.

(*q*) *Cf. Hudson Scott* v. *Barringer*, 23 R. P. C. 79, where the use of samples, of which the method of manufacture was not apparent, to obtain orders was held a prior user. *Betts* v. *Neilson* (1871), 3 Ch. App. 429.

(*r*) *Betts* v. *Menzies* (1859), 28 L. J. (Q. B.) 361.

(*s*) *Moss* v. *Malings*, 3 R. P. C. 373. But it is otherwise if they have been offered for sale though not exposed. *Mullins* v. *Hart* (1852), 3 Car. & K. 297.

(*t*) *Winby* v. *Manchester Steam Tramways Coy.*, 8 R. P. C. 61; *Wesley Richards* v. *Perkes*, 10 R. P. C. 181; *Stohwasser* v. *Humphreys*, 18 R. P. C. 116; *Hudson Scott* v. *Barringer*, *supra*; *Robertson* v. *Purdey*, 24 R. P. C. 273.

(*u*) See *Dollond's Patent* (1776), W. P. C. 43.

(*x*) *Cf.* p. 71, *n.* (*f*).

which would be such a publication as to prevent him from getting a patent, it will not prevent others doing so (*y*).

Use for the purpose of an experiment of a process or article would seem not to be a prior user so as to defeat a later patent, though such process or article was in itself perfectly successful and its use was only abandoned because the main purpose of the experiment failed (*z*).

Experimental user.

With regard to prior user of an experimental nature by the patentee or others a distinction must be made between those cases where the user has been private, and those in which the user has become known to members of the outside public, so that it might have formed an addition to the stock of public knowledge (*a*). With regard to the latter class of case it may be said that if the exact thing subsequently patented has been done under such circumstances that the public may be presumed to have become acquainted with the invention the fact that it was an experiment would not prevent the publication being fatal (*b*), but that if what was done was not the complete invention so that something was wanting for success, the fact that it was an experiment and was unsuccessful is presumed to have discounted the value of any advance made, so that the stock of public knowledge is considered to be unaffected (*c*).

(*y*) *Cf. Gadd* v. *Mayor of Manchester*, 9 R. P. C. 516, C. A., where communications by previous inventor to his partners and advisers with a view of getting a patent were held no publication. See also *Mosely* v. *Victoria Rubber Coy.*, 4 R. P. C. 241; *Humpherson* v. *Syer*, 4 R. P. C. 407, C. A.

The question as to whether the user was merely experimental may, however, be answered differently in the cases of user by the patentee and user by others, see p. 72, *n.* (*h*).

(*z*) *Electrolytic Plating Coy.* v. *Holland*, 18 R. P. C. 521. In *King Brown* v. *Anglo-American Brush Corporation*, 6 R. P. C. 414, O. H.; 7 R. P. C. 436, I. H., and 9 R. P. C. 313, H. L., a machine had been used for the purpose of producing electric light to show experiments with a diving machine. Though in Scotland, the O. H. and the I. H. held this was public user of the machine, the H. L. were doubtful and left the point undecided.

(*a*) Public user does not necessarily mean user by the public, but user in public. *Carpenter* v. *Smith* (1841), W. P. C., *per* ABINGER, C.B., at p. 534; *Stead* v. *Williams* (1844), 2 W. P. C. 126; *Croysdale* v. *Fisher*, 1 R. P. C. 17; *Young* v. *Rosenthal*, 1 R. P. C. 29; *Lifeboat Coy.* v. *Chambers*, 8 R. P. C. 415, I. H.; *Humpherson* v. *Syer*, 4 R. P. C. 407, C. A.; *Taylor's Patent*, 13 R. P. C. 482; *Gramophone Coy., Ltd.* v. *Ruhl*, 27 R. P. C. 629. It would appear to be sufficient if the public have access to the place where the article is, if it is openly shown. *Humpherson* v. *Syer*, *supra*; *Gramophone Coy., Ltd.* v. *Ruhl*, *supra*; but *cf. contra Electrolytic Plating Coy.* v. *Holland*, 18 R. P. C. 521, 527; *Crampton* v. *Patents Investment Coy.*, 5 R. P. C. 382, 403.

(*b*) *Brereton* v. *Richardson*, 1 R. P. C. 165; *Taylor's Patent*, *supra*; *Sinnett's Patent*, 15 R. P. C. 761.

(*c*) *Jones* v. *Pearce* (1832), W. P. C. 122; *Galloway* v. *Bleaden* (1839), W. P. C. 521; *Bovill* v. *Goodier* (1871), Griff. N. C. 47; *Edison and Swan Coy.* v. *Holland*, 6 R. P. C. 243, 277.

With regard to users of the former class, these, unless they have been followed by practical user, are treated as abandoned experiments, and do not affect later patents (*d*). Generally speaking the Courts treat experiments that have only become known to the experimenter's own workmen, or to friends to whom they have been shown as experiments, as within the first class, and are not eager to presume that they became known to the public merely because the public might have had access to, or got to know the nature of, the apparatus or process, unless it is shown that they have actually done so (*e*).

Limits of experimental user.

The Courts have generally taken a broad view on the question of the amount of user which yet leaves such user experimental. So long as such user has not been more than what was genuinely necessary for the inventor to satisfy himself as to the practicability of the invention, or as to the best form of such invention, it is classed as experimental, but if it has exceeded this limit and been carried on for profit or for the ordinary use of the invention, then such user defeats a subsequent patent (*f*). Of course the limit of the permissible user varies

(*d*) *Lewis* v. *Marling* (1829), W. P. C. 490; *Bentley* v. *Fleming* (1844), 1 Car. & Kir. 587; *Moss* v. *Malins*, 3 R. P. C. 373; *Moseley* v. *Victoria Rubber Coy.*, 4 R. P. C. 241; *Kane* v. *Guest*, 16 R. P. C. 433; *Robertson* v. *Purdey*, 24 R. P. C. 273.

(*e*) *Lewis* v. *Marling*, *supra*; *Newall* v. *Elliott* (1858), 27 L. J. (C. P.) 337; *Bentley* v. *Fleming*, *supra*; *Moss* v. *Malins*, *supra*; *Kane* v. *Guest*, *supra*; *Moseley* v. *Victoria Rubber Coy.*, *supra*; *Electrolytic Plating Coy.* v. *Holland*, *supra*; but *cf. Humpherson* v. *Syer*, 4 R. P. C., *per* FRY, L.J., at p. 415.

(*f*) The following are examples of cases where the user was held to be experimental:—

Where inventor tested a cable-laying machine by using it for laying an Atlantic cable. *Newall* v. *Elliott* (1858), 27 L. J. (C. P.) 337.

Where inventor had 600 bottles made in order to test if depth of a certain groove was uniform. *Useful Patents Coy.* v. *Rylands*, 2 R. P. C. 255.

Where a process had been used for purifying several thousand cubic feet of gas and then abandoned. *Hills* v. *London Gas Coy.* (1860), 29 L. J. (EX.) 409.

Where two pairs of paddle-wheels were made for a person interested in the invention to be used abroad. *Morgan* v. *Seward* (1837), W. P. C. 170. See also *Kane* v. *Guest*, 16 R. P. C. 433; *Electrolytic Plating Coy.* v. *Holland*, 18 R. P. C. 521; *Fellows* v. *Brooks*, p. 69, *n.* (*p*).

The following are cases where the user was held not to have been experimental:—

Where contractor publicly used a machine on a contract for four months, and originally had no idea of patenting it. *Adamson's Patent* (1856), 25 L. J. (CH.) 456.

Where workman communicated idea to his master, who converted two machines in July and August and had a new one made which was started the following February, and the patent was not applied for till April. *Elias* v. *Grovesend Tinplate Coy.*, 7 R. P. C. 455.

Where contractor entered into contract for printing machines which were erected and run for a trial period in accordance with contract. The trial was only to test particular machines and not the invention. *Hoe* v. *Foster*, 16 R. P. C. 33, C. A.

Where certain boiler blocks were put in by contractor in boiler erected by him. The Court drew attention to

with the nature of the invention (*g*), and it would also seem that wider limits are accorded to the term experimental user when such user has been by the patentee than when it has been by others (*h*). The fact that it was the intention of the user to apply for a patent or design would furnish a presumption that such user was experimental and secret (*i*).

the fact that the contractor made no attempt to see how invention worked. *Poulton's Patent*, 23 R. P. C. 506, C. A.

Where gauge glasses were sold and used by purchasers till they were worn out, although this was a trial order and glasses were not renewed. *Guilbert Martin* v. *Carr*, 4 R. P. C. 18; see also *Rickerby* v. *Duncan*, 25 R. P. C. 248.

Use of axle on bicycle by person (not patentee) in the way of trade, although object was to see how it worked, *semble*, this result would not have been affected had parts been covered in. *Brereton* v. *Richardson*, 1 R. P. C. 165.

Single anchor made, sold, and used till broken. *Honiball* v. *Bloomer* (1854), 2 W. P. C. 199; see also *Sinnett's Patent*, 15 R. P. C. 761.

(*g*) *Hills* v. *London Gas Coy.* (1850), 29 L. J. (EX.) *per* BRAMWELL, B., at p. 423.

(*h*) *Westley* v. *Tolley*, 11 R. P. C. 602, 607; *cf.* also such cases as *Croysdale* v. *Fisher*, 1 R. P. C. 17.

(*i*) *Moss* v. *Malins*, 3 R. P. C. 373; *semble*, where the prior user under such circumstances was by the defendant, he may be estopped from relying on it, *ibid.*; *cf.*, however, *Humpherson* v. *Syer*, 4 R. P. C. 407, C. A.; *Brereton* v. *Richardson*, 1 R. P. C. 165.

CHAPTER IV

PART I

TRUE AND FIRST INVENTOR

THE Statute of Monopolies provides that the patent must be granted to the true and first inventor, and it is therefore an objection to the validity of a patent that the grant was not so made (*a*). Grant must be to true and first inventor.

The true and first inventor may be said to be the man who substantially originated the invention within the realm (*b*) though he may have adopted suggestions for details and improvements from others, especially from persons employed by him in working out the idea, provided that such suggestions do not form substantially separate inventions (*c*). But the Courts are not eager to find that a man is the inventor because he has made a bare suggestion of an idea or a desired result, which has then been put into practical form by others (*d*). Who is such inventor.

An importer of an invention from abroad is an inventor Importers.

(*a*) 21 Jac. 1, c. 3, s. 6. If the first and true inventor is one of the grantees other persons may be joined with him. See p. 253, *n.* (*a*). As to grants to the personal representatives of an inventor, see p. 253, *n.* (*b*).

(*b*) As to questions of priority, see p. 75, *n.* (*x*).

(*c*) In the following cases the person originating the idea has been held to be the true and first inventor though workmen or others had subsequently made suggestions to him, which were adopted. *Bloxam* v. *Elsee* (1827-8), 1 C. & P. 567; *Allen* v. *Rawson* (1845), 1 C. B. 551; *Sirdar Rubber Coy.* v. *Wallington*, 22 R. P. C. 267; *Smith's Patent*, 22 R. P. C. 59; *Richmond* v. *Wrightson*, 22 R. P. C. 25. See also *Norwood's Patent*, 12 R. P. C. 226, and *Norwood's Patent* (*No.* 2), 15 R. P. C. 103.

But where a material part of the patented invention is obtained from another person the whole patent is bad. See *Ralston's Patent*, 26 R. P. C. 313.

(*d*) *Pirrie* v. *York Street Flax Spinning Coy.*, 11 R. P. C. 429, 447, C. A. Ir.; *Jackson's Patent*, 22 R. P. C. 387; *Marshall's Patent*, 17 R. P. C. 553. See also *Elias* v. *Grovesend Tinplate Coy.*, 7 R. P. C. 455, C. A.; *Winby* v. *Manchester Steam Tramways Coy.*, 8 R. P. C. 65.

Where, too, the originator of the idea had understood it so little that he cumbered his apparatus with parts which prevented it from working, it was held that the man who subsequently put it into practical form was the true and first inventor. *Minter* v. *Mower* (1835), W. P. C. 141.

within the meaning of the Statute of Monopolies (*e*). By modern practice a person to whom the invention is communicated from abroad is classed as such an importer (*f*), and there is a special form provided for applications by such persons (*g*). It seems, however, doubtful if any objection can be raised, after the patent has been granted, because the applicant claimed as the inventor instead of as a person who had received a communication from abroad (*h*). Neither the Patent Act (*i*) nor the Statute of Monopolies (*k*) authorises a grant to any but the true and first inventor, and therefore the power of the Patent Office to grant a patent to a communicatee is because he is the true and first inventor, and it seems difficult to see how, in describing himself as such, he can be said to have made a mis-statement (*l*). A foreigner who is an *alien ami* can also apply direct (*m*) either in the ordinary way, or under the International Convention (*n*).

But if the communication is made by a person in this country the person to whom it is made is not the true and first inventor (*o*), unless, perhaps, the person communicating is a mere conduit-pipe from a person abroad (*p*).

Master and workman.

Although by contract a master may have equitable rights over the invention of his servant (*q*), yet the latter is in law the inventor, even though he has worked in his employer's time and at his expense, and a patent for such invention granted to the master would be bad (*r*).

(*e*) *Edgeberry* v. *Stephens* (1691), Davies 36; *Moser* v. *Marsden*, 10 R. P. C. 350, 359, C. A.

(*f*) *Beard* v. *Egerton* (1846), 15 L. J. (C. P.), 270. It is no objection that such importer has improved on the invention. *Moser* v. *Marsden*, *ubi supra*.

(*g*) See p. 253, *n.* (*a*).

(*h*) See *Avery's Patent*, 4 R. P. C. 152; *Nickels* v. *Ross* (1849), 8 C. B. 679; *Pilkington* v. *Yeakley Vacuum Hammer Co.*, 18 R. P. C. 459.

(*i*) See s. 1 (1).

(*k*) 21 Jac. 1, c. 3, s. 6.

(*l*) "The patentee is the true and first inventor within the meaning of the Patent Law whether he invents himself or whether he simply imports a foreign invention." *Moser* v. *Marsden*, 10 R. P. C., *per* LINDLEY, L.J., at p. 359, C. A. See, however, *Steadman* v. *Marsh* (1856), 2 Jur. (N. S.) 391, and *Milligan* v. *Marsh* (1856), 2 Jur. (N. S.) 1083.

(*m*) *Cf. Beard* v. *Egerton*, *ubi supra*, and p. 3, *n.* (*m*).

(*n*) See p. 259.

(*o*) *Marsden* v. *Saville Street Foundry and Engineering Coy.* (1878), 3 Ex. D. 203; *Tennant's Case*, W. P. C. 125; *Milligan* v. *Marsh*, *supra*.

(*p*) See *per* JESSEL, M.R., in *Plimpton* v. *Malcolmson* (1876), 3 Ch. D. 531, 532; see also *Pilkington* v. *Yeakley Vacuum Hammer Coy.*, 18 R. P. C. 459.

(*q*) *Edisonia, Ltd.* v. *Forse*, 25 R. P. C. 546. These rights are, however, purely contractual and depend on special circumstances. It may be, however, that where an employee, occupying such a position that it is his duty to direct how work is to be carried out, makes an invention, he is bound, since it is his duty to do his best for his employer, to use such an invention and to let his subordinates use it while he remains in his employer's service.

(*r*) *Worthington Pumping Coy.* v.

The fact that the person alleged to be the true inventor permitted or concurred in the patentee obtaining his patent is no answer to this objection (*s*), although, of course, it has weight in discrediting the evidence in support of the plea (*t*). Acquiescence no answer.

The conceiving or working out of an idea which is kept secret and not used practically does not invalidate a patent applied for subsequent to the discovery but before its publication, or an application by the original inventor (*u*). In the case where two persons make the invention independently and both apply for and obtain patents, the priority to be considered is that of the applications, not of the inventions (*x*). Questions of priority.

Part II

Prior Grant

Another ground of objection sometimes raised against Letters Patent is that they are invalid because the monopoly claimed by them had already been granted to some other person. This is only of importance in the case where the application for the second patent has been made between the application for, and the publication of the complete specification of, the first, since if the second application were made after the publication of the first specification the objection would be that it had been anticipated.

This plea of prior grant may be supported on grounds which

Moore, 20 R. P. C. 41; *Heald's Patent*, 8 R. P. C. 430; *Marshall's Patent*, 17 R. P. C. 553; *cf.*, however, the following case.

Where E, the chemist of a firm, made the first suggestion and worked out the idea, but under the direction of one of the partners, the partners took out the patent with E's permission in their own name, it was held that they were the true and first inventors. *Kurtz* v. *Spence*, 5 R. P. C. 181. A very doubful case. Patent held bad on other grounds.

(*s*) *Ralston's Patent*, 26 R. P. C. 313; but *cf. Kurtz* v. *Spence*, *supra*, *n.* (*r*).

(*t*) *Cf. Lifeboat Coy., Ltd.* v. *Chambers*, 8 R. P. C. 420.

(*u*) *Dollond's Case* (1776), W. P. C. 43; *Cornish* v. *Keene* (1837), W. P. C. 501; *Household Coy.* v. *Neilson* (1843), W. P. C. 719 *n.*; *Stead* v. *Williams* (1843), 2 W. P. C. 126; *Kurtz* v. *Spence*, 5 R. P. C. 161, 179; *Smith* v. *Davidson* (1857), 2 S. XIX. 691; *Robertson* v. *Purdey*, 24 R. P. C. 290.

(*x*) Curiously enough this point has never actually been decided; in *Kurtz* v. *Spence*, *supra*, a different view was suggested. But the whole policy of the Act as to giving priority to the first applicant (see especially sections 8 and 11, and pp. 266 *et seq.*) suggest that such first applicant is to be considered the first and true inventor. It must also be remembered that when he applies he is in exactly the position of the first and true inventor as defined by the cases mentioned above, and it would seem strange if any subsequent act of another person could divest him of his rights.

do not depend on the Statute of Monopolies but on the doctrine that the Crown having granted once cannot grant the same thing to a second person (*y*). In such case the patentee may reply that the first grant was void and may support such contention by any of the grounds on which the validity of Letters Patent may be attacked, since if the first grant was a nullity it would still be in the power of the Crown to make a grant to him (*z*).

But the plea of prior grant might be put in another way, although this has never actually been done. The Statute of Monopolies provides that the monopoly granted by the Crown shall not extend for more than fourteen years from the date of the grant (*a*). The total monopoly granted by the two patents would be more than fourteen years from the date which the first bears, and it might therefore be held that the second grant exceeded the power of the Crown. It must, however, be remembered that the real monopoly, which only starts with the publication of the first complete specification and ends fourteen years after the second application is *ex hypothesi* less than fourteen years, and that although the grant is now antedated by statute to the date of the first application, it is in fact not made until the patent is sealed, and the monopoly granted by the second patent expires within fourteen years of this date (*b*).

(*y*) See *Ex parte Bailey* (1872), 8 Ch. App. at p. 63; *Crane* v. *Price* (1842), W. P. C. 412 and note to same.

(*z*) *Robertson* v. *Purdey*, 24 R. P. C. 273; *Mica Insulator Coy.* v. *Electrical Coy.*, 15 R. P. C. 489. This plea also appeared in *Hill* v. *Adams*, 10 R. P. C. 102; *Rothwell* v. *Macintosh*, 11 R. P. C. 274; *Harrison* v. *Nicholson*, 25 R. P. C. 393, 400, 403.

It is essential to show that the subject-matter claimed by the second grant is that claimed by the first grant. *Birmingham Tyre Coy.* v. *Reliance Tyre Coy.*, 19 R. P. C. 298.

It must, however, be remembered that the grant of letters patent is in form of a grant of the right to use the invention (see p. 4, *n.* (*c*)), and it would seem doubtful if the second grant would stand if it prevented the first patentee from working his invention at all, *e.g.*, if the first patentee had claimed a certain integer in combination with others and the second patent claimed this integer *per se*.

But if the grants differ so that the second is not in derogation of the first, the fact that they are so similar that if the first had been published it would have destroyed the subject-matter of the second does not matter. *Blackett* v. *Dickson*, 26 R. P. C. 82, O. H. See also *Osram Lamp Works* v. *Z. Electric Lamp Coy.*, 29 R. P. C. 428.

It might possibly be held that this objection might not go to the grant as a whole, but only to the part covered by the prior grant. *Cf.* *Daw* v. *Eley* (1867), L. R. 3 Eq. 512.

In *Hill* v. *Adams*, *supra*, evidence was given by the defendant invalidating both patents although the only plea was prior grant, KAY, J., refused to grant an injunction and said either that defendant must amend, or he would dismiss action without costs.

(*a*) 21 Jac. c. 3, s. 6. See also *Crane* v. *Price*, *supra*. This objection would seem equally valid if the two grants are to the same person.

(*b*) See, however, *Nordenfeldt* v.

The objection of prior grant as above described necessarily implies that the invention forming the subject of the second patent has not only been described but has also been claimed for in the first. It might also be pleaded that the second patentee was not the first and true inventor in that the first patentee had made the invention and had communicated it to the public before he did so (*c*). It would not seem to be any objection to this plea either that the first patent was bad, or that the invention forming the subject-matter of the second patent was only described and not claimed in the first specification.

Gardner, 1 R. P. C. 10, *Holste* v. *Robertson* (1877), 4 Ch. D. 9, where it was held that the date of the grant of a British patent must be taken as the date of the application for the purpose of determining whether it was granted before or after a foreign patent.

(*c*) This view seems to have been adopted by the Court in *Rose's Patent Coy.* v. *Braby*, 11 R. P. C. 198, I. H. If, however, the two specifications are filed by the same applicant, the objection that the first was a "dedication to the public" of the matters contained therein so as to prevent their being subsequently patented is unsound in law. *Oxley* v. *Holden* (1860), 30 L. J. (C. P.) 60. See also *Lister* v. *Norton*, 3 R. P. C. 199.

CHAPTER V

Utility

The only limitation put by the Statute of Monopolies on the manufactures for which a valid patent can be granted is that of novelty (*a*), but the Courts have held that patents which are not useful are invalid either as being prejudicial to the public (*b*), or on the ground that the patentee has deceived the Crown by representing that his invention has advantages which it in fact has not (*c*). Hence, a patent to be valid must describe and claim an invention which is not only novel but useful. Meaning of utility in patent law.

The term "utility" is, however, used in a very special sense. In the case of a new machine, article, or process, the test may be put briefly as, "Will the invention work, and will it do what is claimed for it?" (*d*). If so, the question of practical

(*a*) *Per* Parke, J., in *Lewis* v. *Marling* (1829), W. P. C. 497.

(*b*) Formerly it was said that the proper plea was that the patent was prejudicial, not that it was not useful. *Per* Alderson, B., in *Jupe* v. *Pratt* (1837), W. P. C. 145, 151. See also *Elias* v. *Grovesend Tinplate Coy.*, 7 R. P. C. 455, 467; *Ward Brothers* v. *Hill*, 20 R. P. C. 189, 200; *Wilson Brothers Bobbin Coy., Ltd.* v. *Wilson and Coy.* (*Barnsley*), *Ltd.*, 20 R. P. C. 1, 15, H. L.

(*c*) *Pirrie* v. *York Street Flax Spinning Coy.*, 10 R. P. C. 34, 39; *Morgan* v. *Seaward* (1837), W. P. C. 187, 197.

(*d*) *Morgan* v. *Seward* (1837), W. P. C. 187; *Welsbach Incandescent Gas Light Coy.* v. *New Incandescent Gas Lighting Coy. Ltd.*, 17 R. P. C. 237, 282; *Fawcett* v. *Homan*, 13 R. P. C. 398, C.A.; *Wilson* v. *Union Oil Mills*, 9 R. P. C. 57.

The following cases show what is meant by non-utility:—

In the case of a patent for making holes in the breach of a gun large enough for air to enter, but too small for powder to pass through, it was found that in fact a hole made as described would let the powder through and therefore the whole object of the invention failed and the patent was held bad. *Manton* v. *Parker* (1815), Dav. P. C. 327.

In the case of a patent for a method of mounting the folding mirror in a reflex camera, the judge found that the method would not work because it would be impossible to keep the camera light tight, and held the patent bad. The decision was in form on sufficiency. *Nicholls* v. *Kershaw*, 27 R. P. C. 237.

In the case of a patent for the use of batteries for keeping the potential of electric lighting mains constant, it was found that these batteries would not charge unless the potential was greater than 125 volts or discharge unless it was under 50 volts, and that the system was therefore useless for keeping a constant potential. Patent held bad. *Lane Fox*

utility is immaterial, as is the question of comparative utility (*e*). It is the utility, or, rather, the practicability of the invention which has to be considered, not the usefulness of the product (*f*), and it does not matter whether or not this is of commercial utility (*g*), or a benefit to the public (*h*), or even in general whether it is suitable for the purposes suggested (*i*).

In the case of a mere improvement it has been said that some advantage of a substantial nature must be shown over what has gone before (*k*), but it seems doubtful whether there can be said to be any distinction in fact between the two classes of inventions. These dicta probably bear more on subject-matter than utility proper, and illustrate the principle that with a small apparent difference it is generally more necessary

v. *Kensington Electric Lighting Coy.*, 9 R. P. C. 413, C. A.

An admission of utility only means that the patentee's process will work, not that he has made a useful improvement. *Wilson* v. *Wilson Brothers Bobbin Coy., Ltd.*, 28 R. P. C. 733, 739, C. A.; but *cf. Presto Coat Collar Coy.* v. *Levy Brothers*, 28 R. P. C. 363, 364, C. A.

(*e*) *Welsbach Incandescent Gas Light Co., Ltd.* v. *New Incandescent Gas Lighting Co., Ltd., ubi supra; Fawcett* v. *Homan, ubi supra; Philpot* v. *Hanbury*, 2 R. P. C. 33; *Kelvin* v. *Whyte, Thompson and Co.*, 25 R. P. C. 177; *Neilson* v. *Harford* (1841), W. P. C. 293, 324, *n.* See *contra*, *Boulton and Watt* v. *Bull* (1895), Dav. P. C. 162; *Easterbrook* v. *Great Western Railway*, 2 R. P. C. 201; *Young* v. *Rosenthal*, 1 R. P. C. 29, 41; and *per* VAUGHAN WILLIAMS, J., in *Ward Brothers* v. *Hill*, 20 R. P. C. 189. Of course the question of utility may be most important on the issue of subject-matter. See Chapter on SUBJECT-MATTER, p. 23.

(*f*) *Cole* v. *Saqui*, 6 R. P. C. 41, C. A.; *Young* v. *Rosenthal*, 1 R. P. C. 29, 41; *Alsop's Patent*, 24 R. P. C. 733. In this case it was said that if the patented process produced the result claimed, misstatements as to the purposes to which such result might be applied would not necessarily make the patent void.

In one case, however, it was held that where the patentee's directions would only enable a workman to produce a right-hand point piece whereas the point pieces used on railways, etc., are invariably left-hand, the patent was bad for non-utility. *Winby* v. *Manchester Steam Tramways Co.*, 8 R. P. C. 61. This decision seems of very doubtful validity.

(*g*) *Badische Anilin und Soda Fabrik* v. *Levinstein*, 4 R. P. C. 449, H. L. *United Telephone Coy.* v. *Bassano*, 3 R. P. C. 313; *Ehrlich* v. *Ihlee*, 5 R. P. C. 437, 449, C. A.; *Edison and Swan Coy.* v. *Holland*, 6 R. P. C. at p. 257, C. A.; *Sunlight Incandescent Gas Lamp Co.* v. *Incandescent Gas Light Coy.*, 14 R. P. C. at p. 775.

(*h*) *Young* v. *Rosenthal*, 1 R. P. C. 29.

(*i*) *Flour Oxidising Coy., Ltd.* v. *Hutchinson* (*J. & R.*), 26 R. P. C. 597; *Alsop's Patent*, 24 R. P. C. 733. See *contra*, *Cornish* v. *Keene* (1837), W. P. C. 501, 506.

(*k*) *Atkins and Applegarth* v. *Castner-Kelner Alkali Co.*, 18 R. P. C. 281. See also *per* VAUGHAN WILLIAMS, L.J., in *Ward Brothers* v. *Hill*, 20 R. P. C. 189, C. A., and *per* HALSBURY, L.C., in *Badische, etc.* v. *Levinstein*, 4 R. P. C. at p. 462, H.L., followed in *Kurtz* v. *Spence*, 5 R. P. C. 183. Perhaps it may be said that in the class of cases referred to in these dicta no useful choice is afforded by the so-called improvement, and that the objections are greater than the advantages. See *Presto Coat Collar Coy.* v. *Levy Brothers*, 28 R. P. C. at p. 364, C. A. For example, in the first-named case while the old process gave a yield of 60 per cent., the patented variation would only give about 25 per cent.

to show a substantially improved result in order to establish invention (*l*). At any rate, it is sufficient on the issue of utility to show that the improvement gives the public a useful choice (*m*), or is of advantage under special circumstances (*n*).

All parts of the invention must be useful.

If several processes or variations are claimed each must be useful (*o*), and the invention must be useful in the sense of working under all ordinary (*p*) circumstances not excluded by specific direction or the general knowledge of the trade, and without any other modifications than those so supplied (*q*).

(*l*) See Chapter on SUBJECT-MATTER, pp. 48, 49. Of course greater cheapness may be such an improved result. *Cornish* v. *Keene, ubi supra*; *Pirrie* v. *York Street Flax Spinning Coy.*, 11 R. P. C. 429, C. A. Ir. See also p. 82, *n.* (*x*).

(*m*) *Scott* v. *Hamling*, 14 R. P. C. 123; *Welsbach Incandescent Gas Light Coy., Ltd.* v. *New Incandescent Gas Light Coy., Ltd., ubi supra*; *British Liquid Air Coy., Ltd.* v. *British Oxygen Coy., Ltd.*, 26 R. P. C. 509, 577, C. A.; *Kelvin* v. *Whyte-Thomson*, 25 R. P. C. 177; *Ward Brothers* v. *Hill*, 18 R. P. C. 481, 489; and 20 R. P. C. 189, 202, C. A.

(*n*) *Atkins and Applegarth* v. *Castner-Kelner Alkali Coy., ubi supra*; *Welsbach Incandescent Gas Light Coy., Ltd.* v. *New Incandescent Gas Lighting Coy., Ltd., ubi supra*; *Ward* v. *Hill, ubi supra*; *Philpot* v. *Hanbury, ubi supra*; *British Motor Syndicate, Ltd.* v. *Universal Motor Carriage and Cycle Coy., Ltd.*, 16 R. P. C. 113. The direction of TINDAL, C.J., in *Cornish* v. *Keene* (1837), W. P. C. 501, 506, that the invention must be an improvement for all the purposes mentioned is hardly reconcilable with modern cases though apparently followed in *Young* v. *Rosenthal*, 1 R. P. C. 29, 41.

(*o*) *Simpson* v. *Holliday* (1866), L. R. 1 H. L. 315; *Morgan* v. *Seaward* (1837), W. P. C. 170; *R.* v. *Cutler* (1847), 3 Car. & K. 215; *Geipel's Patent*, 21 R. P. C. 379, C.A.; *Wilson Brothers Bobbin Coy.* v. *Wilson and Coy.* (*Barnsley*), *Ltd.*, 20 R. P. C. 1, H. L. See *contra Macdonald* v. *Fraser*, 11 R. P. C., *per* Lord RUTHERFORD CLARK, at p. 174.

(*p*) *Haworth* v. *Hardcastle* (1834), W. P. C. 485; *Tubeless Pneumatic Tyre Coy.* v. *Trench Tubeless Tyre Coy., Ltd.*, 16 R. P. C. 291, 311, 312; *Wilson Brothers Bobbin Coy., Ltd.* v. *Wilson and Coy.* (*Barnsley*), *Ltd.*, *ubi supra*, at p. 16. But see *British Motor Syndicate, Ltd.* v. *Universal Motor Carriage Coy., Ltd.*, 16 R. P. C. 113, 130, where it was held that a patent for an engine which would drive on the level, but would probably fail in hilly country, was not bad for non-utility.

(*q*) Thus where a chemical patent directed that a certain operation should be performed in an autoclave and it was found that there were two types of autoclaves in use, viz. iron and enamelled, and that the operation could only be carried out in an iron autoclave, the patent was held bad. *Badische, etc.* v. *La Societé des Usines du Rhone*, 15 R. P. C. 359, C. A.

This was in point of form a decision on sufficiency, but the two issues are often indistinguishable. See *per* Lord DAVEY in *Wilson Brothers Bobbin Coy., Ltd.* v. *Wilson and Coy., Ltd., ubi supra*, at p. 14; *Morgan* v. *Seaward* (1837), W. P. C. 187; *Kurtz* v. *Spence*, 5 R. P. C. 161; *Tubeless Pneumatic Tyre Coy., Ltd.* v. *Trench Tubeless Tyre Coy., supra*; *Wilson* v. *Union Oil Mills*, 9 R. P. C. 57; *Lane-Fox* v. *Kensington Electric Lighting Coy.*, 9 R. P. C. 413, C.A.; *Hattersley and Sons, Ltd.* v. *George Hodgson, Ltd.*, 23 R. P. C. 193, H.L. But if the patented invention works under the general conditions prevailing at the date of the grant that is sufficient. *Incandescent Gas Light Coy.* v. *De Mare Incandescent Gas Light System*, 13 R. P. C. 301; and the fact that perverse effort will produce a useless form within the patent does not disprove utility, *Hopkinson* v. *St. James' Electric Light Coy.*, 10 R. P. C. 46.

Nor in general that by such effort the object of the patent can be defeated. *Reason Manufacturing Coy.* v. *Moy*, 19 R. P. C. 409.

But it is not necessary for all forms to be equally useful, nor, in the absence of any suggestion of *mala fides*, is it essential that the inventor should discriminate between the utility of the different forms (*r*).

So, too, where there are several claims, the matter claimed in each must be useful (*s*), but the fact that the additional part or step in a subsidiary claim is merely unnecessary, or that the form covered by such claim is inferior to the principal form, does not affect the validity unless the addition is said to do something which it will not do, or is introduced *mala fide* (*t*). In general it may be said that the utility of subsidiary claims is not scrutinised so closely by the Courts as the question of their novelty. This is only reasonable since a claim to a monopoly of that which is old would *primâ facie* restrict others from doing something which they may wish to do, whereas a claim for something which is merely of little or no utility would *primâ facie* not injure the general public (*u*).

The invention must be useful in the manner stated.

Where there is an absolute statement in the specification as to the effect of the invention (*x*), or of a step in the invention (*y*), which is untrue, this will generally invalidate the patent, even though it was unnecessary for the inventor to make this

Again the fact that occasionally manual assistance may be necessary to assist the patented device does not matter if this is not unusual with similar devices in the trade. *Miller* v. *Clyde Bridge Steel Coy.*, 8 R. P. C. 198, 201, I. H.; *Ward Brothers* v. *Hill*, 20 R. P. C. 204, C.A. See also *Dudgeon* v. *Thomson* (1873), 3 S. XI. 863, 872, I. H. *Cf.* also *Automatic Coal Gas Retort Coy.* v. *Mayor of Salford*, 14 R. P. C. 450; *Thermit* v. *Weldite*, 24 R. P. C. 441; *British Motor Syndicate Ltd.* v. *Universal Motor Carriage Coy., Ltd., supra.*

(*r*) *Thomson* v. *Batty*, 6 R. P. C. 84, 97; *Macdonald* v. *Fraser*, 11 R. P. C. 169, I. H.; *Benno-Jaffé, etc.* v. *Richardson*, 11 R. P. C. 112; *Automatic Coal Gas Retort Coy.* v. *Mayor of Salford, ubi supra; Adamant Stone Paving Coy.* v. *Corporation of Liverpool*, 14 R. P. C. 11.

(*s*) See cases in note (*o*), *supra*, and *Wilson Brothers Bobbin Coy., Ltd.* v. *Wilson and Co., Ltd., supra; Geipel's Patent*, 20 R. P. C. 545; *Wallace* v. *Jack*, 22 R. P. C. 581.

(*t*) *Lewis* v. *Marling* (1829), W. P. C. 200; *Ehrlich* v. *Ihlee*, 5 R. P. C. 437, C. A.; *Philpott* v. *Hanbury*, 2 R. P. C. 33; *British Vacuum Cleaner Coy.* v. *L. & S. W. Rail. Coy.*, 29 R. P. C. 309, 338, H. L.

(*u*) *Cf. Ehrlich* v. *Ihlee*, 5 R. P. C. 198 and 437, C. A. See also *Brown's Patent*, 25 R. P. C. 86, 120, C. A.

(*x*) Thus where the specification of a patent for apparatus for interlocking points and signals stated that this apparatus rendered it impossible to set the points and signals antagonistic to each other, and this was proved to be untrue, the patent was held bad for non-utility. *Easterbrook* v. *Great Western Railway Coy.*, 2 R. P. C. 201.

Again where the essence of the improvement is its greater cheapness the patent fails for non-utility if this is disproved. *Atkins and Applegarth* v. *Castner-Kelner Alkali Coy., Ltd.*, 18 R. P. C. 281, following dictum of HALSBURY, L.C., in *Badische Anilin und Soda Fabrik* v. *Levinstein, ubi supra.* See also *Manton* v. *Parker*, p. 79, *n.* (*d*); *Wilson* v. *Union Oil Mills*, 9 R. P. C. 57; *Cornish* v. *Keen* (1837), W. P. C. 513; *Alsop's Patent*, 24 R. P. C. 733.

(*y*) *Monnet* v. *Beck*, 14 R. P. C. 777, 847.

statement. Such statements must be carefully distinguished from inaccuracies as to matters of scientific theory, etc., which, although having reference to the subject of the patent, are not stated to be results of the invention (*z*). These cases would in former days probably have come within the doctrine of false suggestion (*a*). But if the invention is useful in fact the Courts do not usually scrutinise closely how much utility is attributable to the cause set out by the patentee, in the absence of any statement which is definitely untrue (*b*).

Evidence on this issue.

There is considerable doubt on whom the onus of the issue of utility lies (*c*), but in practice the patentee offers *primâ facie* evidence on this point (*d*). This evidence generally goes to show that machines made according to the specification will work, and that the patented device is better, at least in some respects, than what has gone before, or that it offers a useful choice to the public (*e*). Frequently this evidence shows that the invention has been largely used or has led to increased public demand for articles embodying it (*f*), and the fact of the defendant's user is often relied on as the best proof of utility (*g*).

(*z*) See Chapter on SUFFICIENCY, p. 98 *n.* (*q*).

(*a*) See Chapter on SUFFICIENCY, p. 98.

(*b*) *Pirrie* v. *York Street Flax Spinning Coy.*, 11 R. P. C. 429, C. A., Ir.

(*c*) There are judicial dicta that the onus is on the plaintiff. *Patterson* v. *Gas Light and Coke Coy.* (1875), 2 Ch. D. 812, 834, and also that it is on the defendant, *per* COTTON, L.J., in *Ehrlich* v. *Ihlee*, 5 R. P. C. 437, 449. Probably in view of the fact that there is no mention of utility in the Statute of Monopolies, the latter view is the more correct. See *Jupe* v. *Pratt* (1837), W. P. C. 145, 151.

(*d*) See *Vidal Dyes Syndicate* v. *Levinstein*, 29 R. P. C., *per* MOULTON, L.J., at p. 254, C. A.

(*e*) For examples of such evidence, see *Moss* v. *Malins*, 3 R. P. C. 378; *Cole* v. *Saqui*, 5 R. P. C. 495.

In considering such evidence the object of the patent must be remembered, *e.g.* in the case of a patent intended to be worked on a large scale, laboratory experiments may not be sufficient to prove utility. See *Patterson* v. *Gas Light and Coke Coy.* (1875), 2 Ch. D. 812, 834; *Kurtz* v. *Spence*, 5 R. P. C. 161; *Pilkington* v. *Massey*, 21 R. P. C. 697, C. A.; *Badische, &c.* v. *Levinstein*, 4 R. P. C. 449, H. L.; *Wilson* v. *Union Oil Mills*, 9 R. P. C. 57.

It is not necessary that all forms should have been made; evidence may be given that they would work if made. *Neilson* v. *Harford* (1841), W. P. C., at p. 316.

(*f*) Of course it must be shown that the article sold is in substance that specified (see *Lambert* v. *International Phonograph Coy.*, 21 R. P. C. at p. 257), though detail variations do not affect this evidence of utility: *British Westinghouse Coy.* v. *Braulik*, 27 R. P. C. 209, 227, C. A. The vidence should also show that this increased demand was occasioned by the patented improvement: *Cole* v. *Saqui*, 6 R. P. C. 41, C. A.

(*g*) *Fawcett* v. *Homan*, 13 R. P. C. 398, C. A.; *Ward Brothers* v. *Hill*, 20 R. P. C. 189, 200; *Lucas* v. *Miller*, 2 R. P. C. 155, 160; *Miller* v. *Searle, Baker & Coy.*, 106, 111; *Pilkington* v. *Massey*, 21 R. P. C. 421.

But of course it must be shown that the machine used by the defendant is substantially identical with the patented machine in respect of the features whose utility is in question. See *per* Lord BLACKBURN in *Clark* v.

The fact of the public not having used the invention or even of the patentee not having done so is little, if any, evidence of lack of utility (*h*), especially if there are circumstances to explain the non-user such as that other and more useful forms were also shown in the specification, or that further improvements had been made in the class of machine or process soon after the date of the patent (*i*).

Issues of sufficiency and utility.

As is stated in the chapter on Sufficiency the issues of sufficiency and utility are often hardly distinguishable (*k*). It has been said that on the issue of utility sufficiency and novelty ought to be assumed (*l*).

Adie (1873), 2 A. C. 315, 337. See also *Lambert* v. *International Phonograph Indestructible Record Coy., Ltd.*, 21 R. P. C. 247; *Winby* v. *Manchester Steam Carriage Co.*, *ubi supra*.

(*h*) *Fawcett* v. *Homan*, 13 R. P. C. 398, C. A.; *Otto* v. *Linford*, 46 L. T. (N. S.) 35, and *Raynor* v. *Livingstone* there quoted; *Edison and Swan Coy.* v. *Holland*, 6 R. P. C. 243, 283, C. A.

(*i*) *Thomson* v. *Batty*, 6 R. P. C. 84, 100; *Lane-Fox* v. *Kensington Electric Lighting Coy.*, 9 R. P. C. 413, C. A.

(*k*) See *per* Lord LINDLEY in *Wilson Brothers Bobbin Coy., Ltd.* v. *Wilson & Coy., Ltd.*, 20 R. P. C. 1, 14, H. L., and *Vidal Dyes Syndicate* v. *Levinstein*, 29 R. P. C. 245, 254, C. A.

On the other hand, Lord LINDLEY seemed to distinguish these issues in *Hattersley* v. *Hodgson*, 23 R. P. C. 193, H. L.; see also *Badische, etc.* v. *Société des Usines du Rhone*, 14 R. P. C. 875, C. A. In *Presto Coat Collar Coy.* v. *Levy Brothers*, 28 R. P. C. 363, C. A., it was said that the issue of non-utility was a particular case of the issue of insufficiency.

(*l*) *Philpott* v. *Hanbury*, 2 R. P. C. 33.

CHAPTER VI

SUFFICIENCY

Obligations on patentee.

THE Patent Act imposes on a patentee the duty of sufficiently describing in his complete specification the nature of his invention and the manner in which it is to be performed (*a*).

These two requirements are quite distinct in their nature. The first relates to the proper limitation of the grant, which is really for the protection of the patentee. The second relates to that disclosure of the new manufacture which is a part of the consideration for the grant, the object being that the public may obtain the full advantages of the patented invention (*b*). Objections under both these heads must be considered under the title of sufficiency.

How far he must distinguish what is new from what is old.

The first objection was formerly frequently pleaded under the form that the specification did not sufficiently distinguish what was new from what was old, and was held to be fatal to the patent in a number of cases. These cases depended to a large extent on the old method of drawing specifications and to a rule as to their construction which no longer holds good (*c*), viz. that anything described in the specification which was not stated to be old was considered to be claimed as new (*d*). With the modern system of definite claiming clauses this rule ceased to be applicable, and the judgment of the House of Lords in *Harrison* v. *Anderston Foundry Company* really marked a new era in patent construction by stating the rule that what is not claimed is held to be disclaimed, and that where a combination is claimed the claim is only for the whole combination and not for

(*a*) Sect. 2 (2).

(*b*) See *Vidal Dyes Syndicate, Ltd.* v. *Levinstein*, 29 R. P. C., at p. 541; *Hookham* v. *Johnson*, 14 R. P. C. 563.

(*c*) For a full discussion of the whole question see the judgments of the C. A. in *British United Shoe Machinery Coy.* v. *Fussell*, 25 R. P. C. 631.

(*d*) See CONSTRUCTION, p. 119.

each of its separate parts; and that it is therefore unnecessary to say which of such parts are new and which are old (*e*).

This objection as now understood would probably be better expressed by saying that the patentee in the specification does not describe with certainty what the monopoly claimed really is. The claim should enable the skilled reader of the specification to know what he might do or might not do without infringing the patent (*f*), and should be definitely limited to something which is novel and useful. It is really in this sense that the objection has been upheld in a recent case (*g*). If a specification either by the description or the claiming clauses clearly shows that the invention is either confined to a combination of elements, such combination being in itself new, or that it is confined to an apparatus or process, which must include an element which is in fact new, it would seem, according to modern cases, to fulfil the requirements to which this objection relates (*h*). "The patentee must distinguish what is new from what is old *by* his claim; he need not distinguish what is new from what is old *in* his claim" (*i*).

If the monopoly is thus clearly and properly defined, so that it is clear of what elements that for which the monopoly is claimed consists, the claim is sufficient, and it is not necessary for the patentee to indicate whether the patentability resides in the combination of the parts or in an element which in itself

(*e*) *Harrison* v. *Anderston Foundry Coy.* (1876), L. R. 1 A. C. 574; overruling *Foxwell* v. *Bostock* (1864), 4 De J. & S. 298. *Foxwell* v. *Bostock* was quoted with approval by HALSBURY, L.C., in *Webb* v. *Kynoch*, 17 R. P. C. 100, but apparently in a limited sense, and has been also followed in *Rowcliffe* v. *Morris*, 3 R. P. C. 17; *Rickerby* v. *Duncan* (*James*) *& Coy.*, 25 R. P. C. 248; and *Leggott* v. *McGeoch*, 10 R. P. C. 429. The latter case can hardly be reconciled with the authorities given above. *Harrison* v. *Anderston Foundry Coy.* was followed on this point in *Moore* v. *Bennett*, 1 R. P. C. 129, 153, H. L.; *Proctor* v. *Bennis*, 4 R. P. C. 363, C. A.; *Perry* v. *La Société de Lunetiers*, 13 R. P. C. 664; *Hookham* v. *Johnson*, 14 R. P. C. 525, 558; *Patent Exploitation Coy.* v. *Siemens Brothers & Coy., Ltd.*, 21 R. P. C. 541, H. L.; *British United Shoe Machinery* v. *Thompson*, 22 R. P. C. 177; *British United Shoe Machinery* v. *Fussell*, 25 R. P. C. 631, C. A.; *Lynch* v. *Philips*, 26 R. P. C. 389, I. H.; *International Harvester Coy.* v. *Peacock*, 25 R. P. C. 763.

(*f*) *British United Shoe Machinery* v. *Thompson, supra*; *British United Shoe Machinery* v. *Fussell, supra*. See also *Clarke* v. *Adie* (1877), 2 A. C. 315; *Rowcliffe* v. *Morris*, 3 R. P. C. 17; *Morton* v. *Middleton* (1863), 3 S. I. 721.

(*g*) *Kynoch & Coy., Ltd.* v. *Webb*, 17 R. P. C. 100, explained in *British United Shoe Machinery Coy.* v. *Fussell*, 25 R. P. C. 631, 656, C. A.; and in *Beston* v. *Watts*, 24 R. P. C. 219, 228. See also *Cartsburn Sugar Refining Coy.* v. *Sharp*, 1 R. P. C. 181; *Philpott* v. *Hanbury*, 2 R. P. C. 153.

(*h*) *British United Shoe Machinery* v. *Fussell, supra*.

(*i*) *Ibid.*, *per* FLETCHER MOULTON, L.J., at p. 651.

is new (*k*). The early decisions as to a patent for an improvement in an old machine being bad, if the whole machine is claimed instead of the specific improvement, are not applicable to patents drawn on the modern system (*l*).

At present, therefore, the objection that the invention is not sufficiently defined would rarely succeed unless the objections of want of novelty or utility would, though there might be cases, *e.g.*, where the claim is unintelligible, where insufficiency would be the proper form of objection (*m*).

Specification must not be ambiguous.

If, however, the specification is ambiguous or misleading, so that it is not made reasonably clear what is covered by the grant, it is insufficient (*n*). For example, if the claim for a combination, where the invention really lies in the presence of something which is new in itself, is so drawn that it would appear that mechanical equivalents could be used for various parts, including the new element, the claim would be bad (*o*).

Greater distinctness necessary where invention small.

Although the above rules are general, there is no doubt that greater distinctness of claim is generally requisite when the invention is a small one and confined to a few parts of a machine or process whose description involves a reference to many other parts (*p*). Of course the question of whether the monopoly is properly defined may depend upon the step in advance in fact made by the patentee (*q*).

It is sufficient if the specification as a whole is clear.

It is not necessary for the validity of a patent that this differentiation should be contained in the claim alone, or indeed that there should be a claim at all. It is sufficient if it appear from the claim read with the body of the specification what the patentee claims as his invention (*r*). Nor is it a valid

(*k*) *British United Shoe Machinery* v. *Fussell, supra.*

(*l*) *E.g. Foxwell* v. *Bostock* (1864), 4 De G. & S. 298, see p. 86, note (*e*).

(*m*) *British Ore Concentration Syndicate, Ltd.* v. *Minerals Separation, Ltd.*, 27 R. P. C. 33, H. L., *per* LORD HALSBURY, at p. 47; *Linotype & Machinery, Ltd.* v. *Hopkins*, 27 R. P. C. 109, H. L., *per* LOREBURN, L.C., at p. 112; *British Vacuum Cleaner Coy., Ltd.* v. *L. & S. W. R. Coy.*, 29 R. P. C., *per* LORD LOREBURN, at p. 320. See also *Tubes Ltd.* v. *Perfecta Seamless Steel Tube Coy., Ltd.*, 20 R. P. C., *per* LORD DAVEY, at pp. 101–103; *Glover & Coy., Ltd.* v. *American Steel & Wire Coy.*, 19 R. P. C. 109.

(*n*) *Campion* v. *Benyon* (1821), 6 B. Moo. (o. s.) 71; *Hastings* v. *Brown* (1853), 22 L. J. (Q. B.) 161. See also *Parkes* v. *Stevens* (1869), L. R. 8 Eq. 358, 365.

(*o*) *Cf. Cartsburn* v. *Sharp*, 1 R. P. C. 185.

(*p*) *Kynoch* v. *Webb*, 15 R. P. C., *per* FITZGIBBON, L.J., at p. 558, approved by HALSBURY, L.C., at 17 R. P. C., p. 107. See also *Beston* v. *Watts*, 24 R. P. C. 219, 228.

(*q*) *Patent Type Foundry Coy.* v. *Richards* (1860), 1 Johns. 381.

(*r*) *Siddell* v. *Vickers*, 7 R. P. C. 292, H. L.; *Tubes, Ltd.* v. *Perfecta Seamless Steel Tube Coy., Ltd.*, 20 R. P. C. 77, H. L. See also *Nordenfeldt* v. *Gardner*, 1 R. P. C. 61, C. A.;