

arising therefrom on the part of the public, was necessary to constitute public use. Public use, as Lord Abinger said in *Carpenter's* case, and the dictum is quoted with approval by Lord Chelmsford in the case of *Betts v. Neilson*, 'means a use *in* public, not *by* the public.' I think there is no room for doubt that the use by the defender of his own paint was of this character. It is quite true that, in order to obtain letters patent, the inventor must disclose his secret to the public in return for the monopoly conferred upon him. But such a disclosure as that is not necessary to the prior use, which will anticipate and so void a patent."

With *Carpenter v. Smith* the case of *Stead v. Williams* (g) may be compared. In that case the patent was for a method of paving streets with wood. It was proved that a form of wood paving, very similar to the plaintiff's, had been laid down prior to the date of the patent, to support the traffic of carriages in the covered porch of the house of *Sir William Worsley* in Yorkshire. On this evidence, Cresswell, J., directing the jury, said: "If you think that is essentially the same thing as the hexagon block introduced by the plaintiff for the purpose of making roads, then, I should say, in point of law, that makes an end of the patent, because that appears to have been introduced by *Sir William Worsley*, or to have been used by him in public—not concealed—no secrecy about it—made known to all persons who came to his house, so far as their ocular inspection could make them. It was intended to be public, not to be made a matter of merchandise, certainly, but merely for his own private use; but the knowledge of it exposed to the public an article in public use, and continued to be used down to the time in question. Therefore, if you think that is the same thing in substance as that which the plaintiff claims, I think that it was publicly used before, and that he cannot have his patent. Whether it had been used by one or used by five, I do not think it makes any difference."

In the subsequent case of *Stead v. Anderson*, (h) evidence was given to shew that the paving used at *Sir William Worsley's* was not the same as the plaintiff's invention, but essentially different in construction. Parke, B., who tried the case, was impressed by this evidence, and directed the jury that the modes of paving were not the same; but, in doing so, he expressly reaffirmed the law as laid down by Cresswell, J., in the earlier case. The learned baron said: "If the mode of forming and laying the blocks at *Sir William Worsley's* had been precisely similar to the plaintiff's,

(g) 2 W. P. C. 136.

(h) 2 W. P. C. 149.

that would have been a sufficient user to destroy the plaintiff's patent, though put in practice in a spot to which the public had not free access."

In *Brereton v. Richardson*, (i) a patent for an improved tricycle was defeated on the evidence of a witness who stated that, prior to the date of the grant, he had ridden an identical machine along public thoroughfares.

In the recent case of *Taylor's Patent*, letters patent for an invention concerning improvements in the construction of domestic fire-places, was held to be void on proof that a similar grate had been in use in a private house prior to the date of the patent. (j)

Prior User means User with Knowledge of the Use.—The prior user which defeats a subsequent patent must not only be a public user, it must also be a user with knowledge of the use. (k) Therefore if a man stumbles upon an invention and uses it accidentally, as it were, without any knowledge of the value of what he uses, or the purpose to which it may be put, such user will not be fatal to a later inventor who patents the discovery in full knowledge of its valuable application.

This rule was clearly laid down by Cockburn, C.J., and Blackburn, J., in *Harwood v. The Great Northern Railway Company*. (l) In that case the patent was for improved "fish" joints for railways. It was proved that prior to the date of the patent a similar fish-joint had under the following circumstances been used on Hackney Bridge. On this bridge the engineer had employed channelled iron with bolts, for the purpose of fastening the timbers placed vertically upon each other, and it happened that at one place there was a scarf-joint which it became necessary to fish. To do this the engineer, having a channelled or grooved iron running longitudinally the whole length of the bridge to support its flooring, availed himself of that iron, as one of the plates whereby to fish the scarf-joint. This use, however, did not utilize qualities which were the most valuable factors in the invention protected by the subsequent patent; that is to say, the strengthening of the iron of the plate, and the fixing of the bolts by making the heads firm in the groove, so as to prevent them from turning. On the Hackney Bridge the channelled iron had been used simply because it was there, just as a flat surface of iron would have been used if iron so shaped had been equally available: and in

(i) 1 R. P. C. 165; Griff. P. C. 54.

(j) 13 R. P. C. 482.

(k) *Walton v. Bateman*, 1 W. P. C.

618 (per Cresswell, J.). See, also, *Muntz v. Foster*, 2 W. P. C. 108.

(l) 2 B. & S. 194; 29 L. J. Q. B. 193.

that use no knowledge was shewn of the valuable qualities for which the invention had since been patented. Cockburn, C.J., said: "The question is, whether the accidental use of a piece of machinery (forming part or the whole of a mechanical contrivance, which may be applied afterwards to some ulterior purpose), without any intention of producing the result, is such a user of the invention as prevents a patent from being taken out by another person; and this turns upon what is the meaning of the language in the Statute of Monopolies, 21 Jac. I. c. 3, s. 6, that letters patent may be granted for 'the sole working or making of any new manufactures' 'which others at the time of making such letters patent and grants shall not use.' Clearly the Statute means what others have invented and used knowingly for the same purpose for which the person who afterwards comes forward as the inventor, and obtains a patent, intends to use it. I go the length of saying that even if this had been done upon a railway, it would not have prevented a subsequent patent from being taken out. Suppose that when railway fishes were made, not of grooved but of flat iron (as they were before *Wild's* patent), a person employed in fishing the joints of a long extended line of railway, finding a piece of grooved iron, had by accident taken it up and used it in one part of the railway instead of a piece of flat iron, without any intention of producing these additional advantages which result from the application of *Wild's* invention or any thought of the advantages which such an application would produce, but still producing them; I cannot think that it would be the true construction of the Statute, and certainly it would be an impolitic and inconvenient construction, to say that a man who afterwards *bonâ fide* invented and discovered that the application of channelled iron for the holding of bolts for fishing railways would be attended with most beneficial results should be prevented from patenting his invention." And Blackburn, J., said: "A man cannot be said to 'use' a manufacture in the sense in which the word must be understood in this Statute, and as it would ordinarily be understood, when accidentally, and without any knowledge or intention, he produces that which, if it were knowingly and intentionally done, and for the purpose of trade, would be a manufacture."

The same principle was noticed in *Edison & Swan v. Woodhouse*, (m) but the Court there abstained from acting upon it and seemed to regard it as a rule of law requiring further consideration. In that case the patent was for the production of a carbon pencil

(m) 4 R. P. C. 99.

for use in electric lamps. The patentee having found that nearly all obtainable carbon was open to objection, by reason of its porosity and lack of homogeneity, invented a process by means of which this defect might be cured. This process consisted in placing the pencil of carbon in a hydro-carbon gas or liquid, and heating it to a very high degree whilst so immersed, by passing an electric current through it. The pencil when so heated decomposed the surrounding gas or liquid, absorbed the carbon therefrom, and so filled up its own pores. In this way the pencil became coated with a homogeneous layer of carbon and capable of glowing with a uniform brilliancy.

It was objected by the defendants that this method (admitted to be of high utility) had been anticipated by a French chemist, *M. Despretz*, in the year 1849. The operations of *Despretz* had, however, been aimed at a different object, not the production of carbon in any special form, but the attainment of a means to fuse and volatilize it. If in the course of his experiments he had demonstrated that the porosity of carbon could be cured in the above manner, this result had not occurred to him as being a discovery of any value, and he had abandoned his researches as without result for the purpose at which they were aimed. The Court of Appeal were of opinion that *Despretz* had not in fact attained the result accomplished by the patentee. They therefore gave no decision on the point whether a prior user without knowledge of the use is sufficient to avoid a subsequent patent. They indicated, however, that when that question again arose, *Harwood v. The Great Northern Railway Company* would require further consideration. (n)

Experiment is not Prior User.

User means Practical User.—The public user which defeats a patent is a practical user. If, therefore, the user relied upon by a defendant is merely experimental, the letters patent will not be avoided thereby. (o) Whether the user alleged has been practical or experimental is a question of fact to be determined by the jury where the issue is tried before a jury. (p) On a review of the authorities it is scarcely possible to lay down general rules, as each case must depend on its own particular circumstances. It may, however, be premised as a general inference from the decided

(n) Per Lindley, L.J., *ibid.* p. 107.

(o) *Lyon v. Goddard*, 10 R. P. C. p. 342 (Esher, M.R.); *Morgan v. Windover*, 5 R. P. C. 295.

(p) Per Tindal, C.J., in *Cornish v.*

Keene, 1 W. P. C. 519; 3 Bing. N. C. 588; 6 L. J. C. P. 225.

cases, that where the invention is one of high merit, the usefulness of which, in its patented form, the public have readily appreciated, the Court will view jealously alleged instances of prior user; especially where the alleged user has been of an isolated character, at a remote date, and speedily discontinued. In such case very direct evidence will be required to rebut the presumption which arises from the abandonment of an alleged antecedent discovery, that it was imperfect and void of utility, and therefore no anticipation of the subsequent completed invention of the patentee.

Prior User which has been Abandoned, is Generally Experiment Only.—In the case of *Lewis v. Marling*, (q) where the patent was for improvements in shearing machines which made it possible to shear from list to list, evidence was given to prove that one *Coxon* had previously made a machine for shearing from list to list; but this machine had not met with public approval, and never came into use. It was further shewn that a model resembling the plaintiffs' machine had been sent over from America and exhibited to a few persons in this country. From this model, however, no machine had actually been made; indeed, it appeared, on the contrary, that the persons in whose possession this model was had bought and used machines manufactured by the plaintiffs. Further evidence was given to shew that a specification alleged to disclose the plaintiffs' invention had been brought over from America, and two persons employed to make a machine from it. But this machine was never completed. On these facts Lord Tenderden, C.J., held that until the plaintiffs' invention came out no machine for shearing from list to list was publicly known or used in England.

In *Jones v. Pearce*, (r) the plaintiff's invention was a wheel constructed entirely of iron, and on the suspension principle, so that the weight was suspended from the upper parts of the wheel. For the defendant witnesses were called, who said that they had made a pair of wheels of similar construction for a *Mr. Strutt*, twelve years before the date of the patent, and that these wheels had been put in a cart used for carrying milk from *Strutt's* farm to his factory; in this cart they had remained until they were worn out. The witnesses further deposed that another wheel, constructed at the same time and on the same principle, had been fitted to a cart for carrying heavy stores on the public road, and used for about a year. But there was evidence that this wheel had not acted very successfully. In directing the jury, Pattenon, J.,

(q) 1 W. P. C. 495; 10 B. & C. 22; 4 C. & P. 52.

(r) 1 W. P. C. 122.

said: "If, on the whole of this evidence, either on the one side or the other, it appeared this wheel constructed by *Mr. Strutt's* order in 1814, was a wheel on the same principles and in substance the same wheel as the other for which the plaintiff has taken out his patent, and that was used openly in public, so that everybody might see it, and had continued to use the same thing up to the time of taking out the patent, undoubtedly then that would be a ground to say that the plaintiff's invention is not new, and if it is not new, of course his patent is bad, and he cannot recover in this action; but if, on the other hand, you are of opinion that *Mr. Strutt's* was an experiment, and that he found it did not answer, and ceased to use it altogether, and abandoned it as useless, and nobody else followed it up, and that the plaintiff's invention, which came afterwards, was his own invention, and remedied the defects, if I may say so, although he knew nothing of *Mr. Strutt's* wheel he remedied the defects of *Mr. Strutt's* wheel, then there is no reason for saying the plaintiff's patent is not good."

Referring to the above cases in *Carpenter v. Smith*, Lord Abinger, C.B., said: "I was counsel in the cases of *Lewis v. Marling* and *Jones v. Pearce*, and I recollect that those cases proceeded on the ground of the former machines being mere experiments which altogether failed." (s)

In *Galloway v. Bleaden*, (t) the patent was for certain improvements in the construction of paddle-wheels for propelling vessels. Tindal, C.J., in directing the jury, pointed out that the main point was, whether the invention was new as to its public use and exercise in England? "Upon that point," said the learned Chief Justice, "the law is undoubtedly now understood to be this—a mere experiment, or a mere course of experiments, for the purpose of producing a result which is not brought to its completion, but begins and ends in uncertain experiments—that is not such an invention as should prevent another person, who is more successful, or pursues with greater industry the chain in the line that has been laid out for him by the preceding inventor, from availing himself of it, and having the benefit of it; therefore, the main point in this case is, whether all that is allowed to have been done by *Mr. Field* rested in experiment, and unsuccessful experiment, not conducted to its full result, or whether it was a complete discovery of that which now forms the subject-matter of the patent. . . . The witness says, 'In 1835 we made a great many

(s) 1 W. P. C. 543.

(t) 1 W. P. C. 521, p. 525.

experiments, of which the general character was to ascertain the various qualities of wheels, chiefly cycloidal wheels, and comparing those wheels with *Morgan's* wheels. I had a very extensive apparatus constructed for the purpose of these experiments; it stood in a very public part of the premises, no person was excluded, a great many saw it. It was in the thoroughfare of the manufactory. We had between 400 and 500 employés at that time in our manufactory.' . . . But that apparatus they constructed merely for the purpose of deciding on these experiments. . . . Mere experiment, afterwards supposed by the parties to be fruitless, and abandoned because they had not brought it to a complete result, that will not prevent a more successful competitor, who may avail himself, as far as his predecessors have gone, of their discoveries, and add the last link of improvement in bringing it to perfection. If that is the case, the plaintiffs are entitled to your verdict."

In *Gibson v. Brand*, (u) the same learned judge said: "It would not be sufficient to destroy the patent to shew that learned persons in their studies had foreseen, or had found out this discovery that is afterwards made public, or that a man in his private warehouse had, by various experiments, endeavoured to discover it and failed, and had given it up."

In *Bentley v. Fleming*, (v) the patent was for a card machine. There was evidence that about five or six weeks before the letters patent were obtained, the inventor had lent a machine, constructed according to this patent, and in complete working order, to one N—, for the purpose of trying whether it would set the teeth of the cards. N—'s room, where the machine was placed, was in a mill, and the evidence shewed that workmen were constantly going backwards and forwards to and from the room. On this, counsel for the defendant contended that the patent was bad from prior user. But Cresswell, J., overruled the objection. (w)

In *Stead v. Williams*, (x) Tindal, C.J., said: "As to its being publicly known in this country, I take it that there is a great difference between the knowledge of it as a thing that would answer, and was in use, and the knowledge of it as a mere experiment that had been found to be a failure and thrown aside. If you are dealing with an article of merchandise, or with an article of ordinary use—if a person has had a scheme in his head and has carried it out, but after a trial has thrown it aside, and the thing

(u) 1 W. P. C. 628.

(v) 1 C. & K. 587; 4 C. B. 479.

(w) But see Fry, L.J., in *Humpherson*

v. *Syer*, 4 R. P. C. 415.

(x) 2 W. P. C. 126, p. 135; 13

C. P. 218; 7 M. & G. 81E.

is forgotten and gone by—then another person re-introducing it may, within the meaning of this Act, be the inventor and first user of it so as to justify a patent. There is one instance where a patent was taken out for wheels on the suspension principle, bearing a proportion of the weight from the upper rim of the wheel, as well as supported on the spokes below by the perpendicular pressure. It was proved in that case that *Mr. Strutt* of Derby had used a cart with wheels on that principle some time before. After using it a year or two he threw it aside. It was totally forgotten; and some fifteen years afterwards, a man brought the thing to perfection, and took out a patent; and it was held that that former use by *Mr. Strutt* having been abandoned as a useless thing was no impediment in the way of a patent. (y) So also in the case alluded to of *Cornish v. Keene*. (z) An attempt had been made to introduce new elastic matters, combined, for the purpose of making braces and bandages and various articles of that sort. I remember well in that case the Chief Justice left it to the jury to say whether these were experiments. Some pieces were actually produced which had been manufactured, and some of these things which had been manufactured had been sold. It was left with the jury to say whether that was an introduction of it, so manifest, or whether it was a mere failing experiment, which had been abandoned so as to leave the way open to any new speculator in it, who yet might bring the patent to perfection.”

In *Household v. Neilson*, (a) Lord Brougham said: “If an invention has not been completed, but if it all rests in experiment and trial, then it is a most material circumstance as a test whether any given act of a party, other than the inventor, was trial or complete invention; it is a most salutary and important test to apply with a view to ascertain that, to see whether he abandoned or continued it. If he abandoned it, if he gave it up altogether, and for twenty or thirty years did nothing, it is a very strong presumption, that it was only experimental, not an invention completed.”

In *Honiball v. Blumer*, (b) Martin, B., while expressing an opinion that the antecedent user in that case had not been mere experiment abandoned as a failure, said: “I think myself if it was really an experiment, that if *Mr. L.* had put this anchor, having invented it or manufactured it, on board the *W. H.*, or a steamboat for

(y) *Jones v. Pearce*. 1 W. P. C. 122.

(z) 1 W. P. C. 511; 3 Bing. N. C. 588;
6 L. J. C. P. 225.

(a) 1 W. P. C. p. 713; 9 Cl. & F. p. 808.

(b) 2 W. P. C. 199; 10 Ex. 538; 24
L. J. Ex. 11.

the purpose of trying whether it would answer, and it did not answer, and then it was returned on that ground, then I do not think that would interfere with the patent, but I do not understand that it was so," etc.

In the case of *Daw v. Eley*, (c) Wood, V.C., held that the antecedent existence of an invention not shewn to have been brought to any successful result, but which was so far similar to the protected invention, that if subsequent in date to the patent it would have been held a colourable and clumsy imitation for the purpose of effecting the same result, did not invalidate the patent by anticipation.

In *Edison & Swan v. Woodhouse*, (d) where the patent related to the incandescent electric lamp, the defendants relied on anticipation by a lamp exhibited at Newcastle by *Mr. Swann* prior to the date of the grant. The evidence, however, shewed that this lamp had not come into practical use, but remained a mere scientific curiosity. On this the Court of Appeal held that the lamp was no anticipation. Fry, L.J., said: "On the 12th March, 1879, *Mr. Swan* again described his lamp to a Gateshead audience, but it does not appear that he exhibited it; and from that time it has, so far as this case is concerned, disappeared from history, and its disappearance is, we think, cogent evidence that *Mr. Swan's* lamp, as it was exhibited, was not a practical success; that *Mr. Swan* could not do what *Mr. Edison* did, and that the difference between the carbon rod and the carbon filament was the difference between failure and success."

Prior User at a remote Date is usually mere Experiment.—In *Mosley v. The Victoria Rubber Company*, (e) the following case of prior user was chiefly relied upon. In the year 1860, twenty-three years before the date of the plaintiff's patent, one *Heartfield* was engaged experimenting in printing on indiarubber. In the course of these experiments he produced some small patterns of a similar character to the plaintiff's goods, and by similar processes. These experiments he conducted at his own house. The resulting patterns were shewn by him to a *Mr. Packham*, but nothing more was done. The patterns were thrown aside, became decomposed, and were eventually destroyed. Declining to infer prior user from this evidence, Chitty, J., said: "This evidence is wholly insufficient to establish prior user. It amounts to nothing more than mere experiments treated as of no value to the experimenter himself, and the person

(c) L. R. 3 Eq. 497.

(d) 4 R. P. C. 92.

(e) 4 R. P. C. 241.

to whom he shewed them, but cast aside as worthless some twenty-three years before the plaintiff's patent, and suffered to remain in oblivion until they were thought of for the present trial. They did not in any respect add to the stock of public knowledge on the subject." (*f*)

In *Morgan v. Windover*, (*g*) it was proved by witnesses who could not be impeached that a carriage spring of construction similar to the plaintiff's had been made and fitted to a carriage forty years before. But there was no evidence of anything further having come of it. The carriage in question had not been sold, but had been made to the order of one coachbuilder by another for the use of a relative of the latter. In the Court of Appeal, Cotton and Bowen, L.JJ. (Lord Coleridge, C.J., dissenting), held that this evidence established only abandoned experiment and not anticipation. (*h*)

In *Dick v. Tullis*, (*i*) the Inner House of the Court of Session, reversing the Lord Ordinary, declined to avoid a patent on the evidence of two interested persons, who alleged that they had sold, many years before, articles secretly manufactured by them according to the pursuer's process. In such case unsuccessful experiment is the proper inference to draw. "It is not easy," said the Lord Justice Clerk, "to conceive that a make of belting which has so taken the market that its sale from the date of its introduction by the pursuer has risen by leaps and bounds, and now, in its ninth year, is practically equal to £100,000 per annum, should, when made and put out in hundreds at an earlier period, have left no recollection of it or trace of recollection on the mind of anybody in the trade and should have fallen so flat that it ceased to be manufactured or sold at all. One would gather that either there had been no such sales or that the sellers had not succeeded in producing the same article or anything like it." (*j*)

Profitable User may still be Experiment only.—It may occasionally happen that the nature of the invention may make it impossible for the patentee to test his discovery without some user in public,

(*f*) 4 R. P. C. 253.

(*g*) 4 R. P. C. 417; 5 R. P. C. 295; 7 R. P. C. 131.

(*h*) In the House of Lords the decision of the Court of Appeal was reversed, on the ground that there was not sufficient subject-matter to support a patent for the alleged invention. The finding of the Court below as to prior user, however,

was not disturbed (R. P. C. 7, R. P. C. 131).

(*i*) 13 R. P. C. 149.

(*j*) See, also, *Jones v. Pearce*, 1 W. P. C. 122. In *Kane v. Guest*, 16 R. P. C. 442, prior user of a process occasionally resulting in a saleable product, but eventually discontinued, was held by Stirling J., to be experiment only.

and perhaps even a profitable user. In such a case the Courts, where they have considered the patentee to be dealing fairly by the public, have shewn a disposition to support the patent and treat such preliminary user as experimental.

Thus, in *Newall v. Elliott*, (k) where the patent was for an apparatus for laying down submarine telegraphic cables, it was proved that the plaintiff—who apparently *bonâ fide* believed that he could not adequately test the practicability of his invention by experiments at his own works—had constructed and used in executing a government contract for laying a cable in the Black Sea an apparatus giving effect to his invention prior to his application for letters patent. Upon this transaction a profit had been realized by the patentee. Finding the apparatus worked successfully, he then took out his patent. It was proved that great care had been taken to confine all knowledge of the apparatus to the inventor's own workpeople; nevertheless, the apparatus had been seen by a number of other persons, including a government officer, under whose supervision the cable had been shipped. No use had been made by any one of the knowledge so obtained. On these facts the Court of Common Pleas held that the proper inference was not prior user but experiment only. Byles, J., in delivering the judgment, said: "A necessary and unavoidable disclosure to others, such as here appears, if it be only made in the course of mere experiments is no publication, although the same disclosure if made in the course of a profitable use of an invention previously ascertained to be useful would be a publication—*In re Adamson's Patent*. (l) The answer to this third objection, therefore, depends on the fourth and last and main objection, which was this, that the use of the apparatus for profit before the date of the letters patent was a use which avoided the patent. It must be, and is, conceded on the part of the plaintiffs that an inventor's public use for profit of an invention, already ascertained by previous experiments to be useful, is a gift of the invention to the public, and avoids a subsequent patent; and it is conceded by the defendants that a use before the patent, merely experimental and tentative, does not avoid it. Now, the use here made of the invention in actually laying down the cable was a use which partook of both characters. On the one hand, it was experimental and tentative; but, on the other, the experiment itself turned out to be not only successful but beneficial to the

(k) 27 L. J. C. P. 337, p. 342; 4 C. B. (N. S.), 293.

(l) 25 L. J. Ch. 457; 6 De G. M. & G. 420.

inventor at the moment. The true question, therefore, seems to be this, Is an experiment performed in the presence of others, which not only turns out to be successful but actually beneficial in the particular instance, necessarily a gift to the world? In the case under consideration experiments on dry land were found to be indecisive, the decisive experiment still remains to be made on a large scale and in deep water. An opportunity presents itself in the course of a government contract—not a contract for the use of that particular apparatus, but a contract for laying down the cable by any means the contractor may select. The experimenter is obliged either to experiment in a way that may turn out to be useful in the particular instance, or else not to make any efficient and decisive experiment at all. The coincidence of an experiment with actual immediate profit or advantage from it, if successful, is unavoidable. Suppose even that this coincidence had been accidental. Suppose that in the course of the voyage the inventor had tried some further and new experiment with an alteration of the apparatus, which alteration had at once answered some useful purpose. Surely that further invention would have been his property. Otherwise, a man cannot have the property in an invention unless it starts from his brain so fully matured and armed that it not only succeeds at the first trial, but accomplishes on that very trial some profitable or useful purpose. If, indeed, the plaintiff in the present case had on other and subsequent voyages used his apparatus and unnecessarily delayed his application for a patent, he would have given his invention to the world. But here, the arbitrator must be taken to have found that the inventor lost no time, but applied for his patent with reasonable expedition.”

With the above case may be contrasted the case of *in re Adamson (m)*, cited in the foregoing judgment. In that case a contractor for certain harbour works had in the progress of his undertaking invented an apparatus consisting of a travelling staging and crane, which greatly facilitated the progress of the works. From the nature of the invention it could only be fully tested in a place and under circumstances which amounted to public user. After having employed the apparatus for four months on the works in question, the inventor applied for a patent. In an affidavit supporting the application it was stated that no one had used the invention except the applicant and the men working under his directions, and that the delay in applying

(m) 25 L. J. Ch. 457; 6 De G. M. & G. 420.

for the patent was due to the fact that it was impossible to test the efficacy of the invention except in rough weather and in the public view. Lord Cranworth, C., however, refused the application, on the ground that the four months of preliminary user constituted a dedication to the public.

The decision in this case is clearly distinguishable from *Newall v. Elliott*, (n) inasmuch as the Lord Chancellor was of opinion, on the evidence before him, that the applicant so far from having acted only in the way of *bonâ fide* experiment, had not originally intended to take out a patent at all.

In *Hoe v. Foster*, (o) the patent was for an invention connected with printing, imported from America, where it was already known and in practical use. Prior to the taking out of letters patent in this country the invention had been used on several occasions in the printing of a daily paper at Liverpool. Such user, it was contended, was merely experimental, and had been resorted to only for the purpose of testing whether the invention would work in practice. The Court, however, rejected this argument, and held that user under such circumstances was a dedication of the invention to the public, and avoided the subsequent letters patent.

No Anticipation by a Useless Machine.—It sometimes happens that the skill of an inventor lies in his applying to a useful purpose a machine or process which has formerly existed or been known only in an impracticable form, or as a chemical curiosity. Where this is so the prior existence or knowledge of the useless machine or process is no anticipation of the later application of it in a valuable form, unless it can be shewn that no further invention was required to achieve the successful result, as would be the case, for instance, where the uselessness of a machine was due to defects which any workman of reasonable skill could remedy. (p)

In *Jones v. Pearce*, (q) Patteson, J., directed the jury that if the anticipation relied upon by the defendant had in their opinion been a useless invention, then it did not defeat the plaintiff's patent.

In *Murray v. Clayton*, (r) James, L.J., quoted and followed the dictum of Patteson, J., in the above case. The learned Lord

(n) 27 L. J. C. P. 342; 4 C. B. (N. S.), Brett, J.
293.

(q) 1 W. P. C. 124.

(o) 15 R. P. C. 573; 16 R. P. C. 33.

(r) L. R. 7 Ch. 581.

(p) *Burrow v. Baylis*, Griff. 45 (per

Justice said: "I am not aware of any principle or authority upon which the exhibition of a useless machine, which turns out to be 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. . . Therefore, if there were defects in the German machine which made it useless, and the plaintiff afterwards made a machine in which those defects were remedied so as to make it a good machine instead of an abortive one, he would be entitled to maintain his patent."

In *Young v. Fernie*, (s) the patent was for a process of obtaining paraffine oil for practical purposes by heating bituminous coal. It was objected that the invention was not new; that the production of paraffine oil from coal was well known to chemists; and that means of achieving it by a heating process had been described before. The evidence shewed, however, that while this was so, no one had yet succeeded in attaining a process by which oil could be produced in such quantities and with such ease as to make the product a merchantable article; while, on the other hand, many laborious experiments had been made by different persons with this object but without success. The plaintiff's process was the first process which had really attained this result.

Stuart, V.C., held that the plaintiff's invention was good subject-matter for a patent. His Honour said: "*Mr. Fernie*, one of the defendants, has adduced in evidence a passage from the work of an eminent American chemist, *Dr. Antisell*. . . . This book contains a short history of the manufacture of paraffine oils and paraffine, and it gives the following extract from a publication by Reichenbach in 1854: 'So remained paraffine unto this hour, a beautiful item in the collection of chemical preparations, but it has never escaped from the rooms of the scientific man.' Something, therefore, remained to be ascertained, in order to the useful application of this article for economical and commercial purposes. This illustrates the important distinction between the discoveries of the merely scientific chemist and of the practical manufacturer who invents the means of producing in abundance, suitable for economical and commercial purposes, that which previously existed as a beautiful item in the cabinets of men of science. What the law looks to is the inventor and discoverer who finds out and introduces a manufacture which supplies the

(s) 4 Giff. 577; 10 L. T. (N. S.), 865.

market, for useful and economical purposes, with an article which was previously little more than the ornament of a museum. It has been established, to my satisfaction, by the evidence in this case, that the plaintiff *Young* is an inventor of this class, and that his patent is entitled to the protection of the law. I find that he has ascertained, by a course of laborious experiments, a particular class of materials among many, and a particular process among many, which has enabled him to create and introduce to the public a useful manufacture, which amply supplies the market with that which, until the use of the materials and process, and temperature indicated by him, had never been supplied for commercial purposes. At the date of his patent something remained to be ascertained which was necessary for the useful application of the chemical discovery of paraffine and paraffine oils. This brings it within the principle stated by the Lord Chancellor in the late case of *Hills v. Evans*." (t)

(t) 31 L. J. Ch. 457; 4 De G. F. & J. 288.

CHAPTER VIII.

UTILITY OF THE INVENTION.

Utility Essential.—No invention is valid subject-matter for a patent grant unless it is useful. (a) The condition of utility, like that of novelty, is an ancient condition of the common law. At law no monopoly (involving, as it necessarily did, a temporary deprivation of public right) could be supported which did not eventually result to the advantage of the community. (b) A monopoly when granted by the Crown to an ingenious inventor as a reward for a useful discovery was an encouragement to others to invent, and so increase the industrial wealth of the nation. Such a monopoly was therefore justified in the public interest. But a monopoly granted to an inventor of some useless contrivance, so far from stimulating the progress of the country, merely hindered and hampered trade by conferring, at the expense of the public at large, a special privilege upon an undeserving person. (c) Hence, it has always been upon the assumption that he has discovered a useful invention, that an inventor has come to the Crown to ask the grant of a patent monopoly, and upon such assumed utility, in fact, is the grant always made. (d)

The word “utility” does not occur in the Statute of Monopolies, but this essential quality of every patentable invention is clearly preserved by that Act. In *Morgan v. Seaward*, Parke, B., said: “A grant of a monopoly for an invention which is altogether useless may well be considered as mischievous to the State, to the hurt of trade, or generally inconvenient, within the meaning of the Statute of James I., which requires as a condition of the grant that it should not be so, for no addition or improvement of such

(a) Coke, *Inst.* 184.

(b) See ante, pp. 4, 7.

(c) See Ashurst, J., in *Turner v.**Winter*, 1 T. R. 605; 1 W. P. C. 8.

(d) See ante, pp. 7, 40.

an invention could be made by any one during the continuance of the monopoly, without obliging the person making use of it to purchase the useless invention." (e) Referring to the same point in *Elias v. Grovesend Tinplate Company*, (f) Lindley, L.J., said: "The Statute of Monopolies, 21 James I., prohibits monopolies, but says in Section 6 that, 'Any declaration before mentioned against monopolies shall not extend to any letters patent'—I am reading it short—'for fourteen years for the sole working or making of any manner of new manufactures within this realm to the true and first inventor of such manufactures, which others at the time of making such letters patent shall not use.' Then comes a passage which is often forgotten, but which is of the utmost importance in dealing with patent cases—'So as also they'—that is, the letters patent—'be not contrary to the law, or mischievous to the State by raising of prices of commodities at home, or hurt of trade, or generally inconvenient.' That is to say, it does not follow that because there may be something which answers the description of a new manufacture that, although there may be some person who, in one sense, can be called an inventor, he is entitled to a patent for his new manufacture. It is very singular that the Statute of James says nothing whatever about utility, but utility has been engrafted into it because of the words to which I have called attention: that is to say, it has been found by experience to be mischievous to the State to grant patents which are not useful as well as new. I call attention to that to shew the extreme importance of those words." (g)

It would be superfluous to do more than glance very briefly at the authorities on a point so well established.

In *The King v. Arkwright*, (h) Buller, J., held that it was a

(e) 2 M. & W. 562; 1 W. P. C. 197.

(f) 7 R. P. C. p. 467.

(g) Recitals alleging the utility of the invention were inserted in early patent grants. In *Lord Dudley's Patent* (1622) the following recital is found, "We, graciously favouring and willing to cherish ingenious and profitable inventions, and finding that the working and making of the said iron, by the means aforesaid within this kingdom, will not only in itself tend to the public good thereof, but also thereby the great expense and waste of timber and wood converted into charcoal and consumed upon

iron-works will be much abated, and the remnant of wood and timber within this land will be much preserved and increased; of the want whereof not only ourself in respect of provision for our shipping and otherwise, but also our subjects for many necessary uses are very sensible, and holding it agreeable to justice that the authors of so laudable and useful inventions should in some good measure reap the fruits of their studies, labours, and charges, KNOW YE," etc., 1 W. P. C. 14. See also, the *Small Patents*, 1 W. P. C. 9.

(h) Dav. P. C. 138; 1 W. P. C. 64.

question for the jury whether the material part of the machine described in the specification was useful, and that if they were satisfied that it was not so, then the patent was void.

In *Turner v. Winter*, (i) Ashhurst, J., said that the patent would be contrary to law if the public did not derive an advantage from the communication of the invention.

In *Manton v. Parker*, (j) the utility of the invention failed, and the patent was held void.

In *Manton v. Manton*, (k) and *Bovill v. Moore*, (l) Gibbs, C.J., held that in order to support a patent monopoly the plaintiff must show that his invention is useful.

In *Russell v. Cowley*, (m) Lord Lyndhurst, C.B., said that the first question to be considered was whether the invention was new and useful.

In *Hill v. Thompson*, (n) Dallas, J., directed the jury that the invention must be useful, and Lord Eldon cited this ruling with approval.

In *Neilson v. Harford*, (o) the Court of Exchequer held that the machine protected by the patent must be one beneficial to the public.

In *Dangerfield v. Jones*, (p) Wood, V.C., said: "A mere trifling matter, a thing of no value, will not do; you must shew that you have invented something useful—a new and useful improvement in manufacture."

And in *Young v. Rosenthal*, (q) Grove, J., said: "The invention must be new and useful; to be useful it must be new. There is no utility in inventing something known before."

A Small Amount of Utility is Sufficient.—The Court will not weigh nicely the degree of utility in an invention. A very small amount of utility is sufficient to support a patent.

In *Morgan v. Seaward*, Alderson, B., in directing the jury, said: "It is not for you to consider to what extent the thing is useful. If it is a useful invention, then it is a subject to be protected by patent; and if, on the other hand, it is of no use, then it is not a subject to be protected by patent. The issue is whether it is of any use at all. It is not material, however, that the

(i) Dav. P. C. 151; 1 T. R. 602.

(j) Dav. P. C. 327; 1 W. P. C. 192 n.

(k) Dav. P. C. p. 349; 1 W. P. C. 192 n.

(l) Dav. P. C. p. 399. See, also, Lord Ellenborough in *Huddart v. Grimshaw*, Dav. P. C. 265; 1 W. P. C. 86.

(m) 1 W. P. C. 467.

(n) 3 Mer. p. 629; 1 W. P. C. p.

(o) 3 M. & W. 806; 1 W. P. C. 331.

(p) 13 L. T. (N. S.), 142.

(q) 1 R. P. C. 30.

improvement should be great. It is sufficient if it is an improvement at all." (r)

In *Haworth v. Hardcastle*, (s) the patent was for an invention of machinery for taking up calicoes, muslins, linens, and other similar fabrics for the purpose of drying. The same learned judge gave a like direction to the jury, who found that the machine was new and useful on the whole, though not useful in some cases; and the Court of Common Pleas, on argument for a non-suit, held the direction right and the utility sufficient.

In *Tetley v. Easton*, (t) Pollock, C.B., said: "It is not necessary that a patent should be so useful as to exclude everything else; it is quite sufficient if on any occasion it is useful."

In *Plimpton v. Malcolmson*, (u) Jessel, M.R., said: "As regards utility, the law is very clear that a small amount of utility will do. There are so many authorities on the subject that I am almost ashamed to mention them, but nothing can be better settled. I will refer without reading them to *Neilson v. Harford* (v) and the *Household Coal and Iron Company v. Neilson*. (w) I might refer to a couple dozen cases if necessary as to the utility, and they all shew what a very small amount will do."

So likewise in *Otto v. Linford*, (x) the same eminent judge laid down a similar rule as to the amount of utility required to support a patent. There it was contended that one of the patentee's claims was for a matter which was useless; in coming to another conclusion, Jessel, M.R., said: "Therefore there is evidence of utility. It is very small indeed as regards No. 1, because that is not the one which proved most useful, but it is quite sufficient for the support of a patent, and as to this question of utility very little will do."

Again, in *Phillpott v. Hanbury*, (y) Grove, J., said: "It has been decided over and over again that the slightest amount of utility (I will not say an infinitesimal scintilla, but a very slight amount of utility) is sufficient to sustain a patent."

In the case of *Badische Anilin und Soda Fabrik v. Levinstein*, (z) Lord Halsbury, C., citing with approval the above-quoted dictum of Alderson, B., said: "Baron Alderson once said, if it was of any use to the public, a new invention could not be said to be void

(r) 1 W. P. C. p. 172. Cf. Coleridge, J., in *Betts v. Menzies*, 14 Q. B. 374.

(s) 1 Bing. N. C. 182; 4 Mo. & Sc. 720.

(t) Macr. P. O. 63.

(u) L. R. 3 C. D. 582.

(v) 1 W. P. C. 295.

(w) 1 W. P. C. 675.

(x) 46 L. T. (N. S.), 41.

(y) 3 R. P. O. 33. See, also, *Pirrie v. York Street Flax Co.* 10 R. P. C. 89; 11 R. P. C. 429.

(z) 12 App. Ca. 712; 4 R. P. C. 462.

for want of utility; and an admitted contribution to the useful arts of a new product can hardly be said to be of no use."

Utility does not Depend on Satisfying an Urgent Public Need.—Sufficient utility may exist in a comparatively trifling invention to make it good subject-matter for protection by letters patent. It has never been required of an inventor that he should come to the Crown only with a discovery of urgent necessity to the public. And although Sir Edward Coke says that every new manufacture to deserve the privilege of a patent must have *urgens necessitas* and *evidens utilitas*, (a) this, in the light of the authorities, is clearly too severe a test. A new toy may have sufficient utility to support a patent. "The amusement of children of all ages," said Kekewich, J., in *Cole v. Saqui*, "is a useful thing, and I see no reason why a top should not be regarded as having utility for the purposes of a patent as much as a steam engine or any other more important machine." (b)

In the case of the *American Braided Wire Company v. Thomson*, the House of Lords upheld a patent for improvements in the construction of ladies' dress improvers. Lord Herschell, in meeting the objection that the discovery was of a trifling nature, and not of something important to the public good, said: "If the demand of the public for a particular article of dress be better met by a new combination than it has been by articles previously in use, and if this new combination, though its component parts be not new, required some exercise of the inventive faculty to produce it, I think it can be protected by a patent, though it may be impossible to say that the invention is important or necessary for the public good." (c)

So likewise in *Young v. Rosenthal*, where the patent was for improvements in ladies' corsets, Grove, J., said: "I think in law utility means an invention better than the preceding knowledge of the trade as to a particular fabric. It does not mean abstract utility. Therefore, even if you are of opinion that stays are very bad things, you must not say this is useless because stays are bad things." (d)

An invention may have sufficient utility to support a patent in the sense of producing a better article than anything of the like kind previously known in the trade to which it relates, even when the article so produced is better in one respect only, and actually

(a) 3 *Inst.* 184.

(b) 5 R. P. C. 495; this patent was subsequently held void by the Court of Appeal, for want of novelty and invention;

6 R. P. C. 44.

(c) 6 R. P. C. 528.

(d) 1 R. P. C. p. 34.

inferior in others. For such an invention affords the public a larger area of choice in the particular class of article, and some persons may prefer the same article with one quality accentuated, others with another.

Thus, in the case of incandescent gas lighting, a mantle of greater rigidity than any used before may have, by reason of that quality, a patentable utility, even although this result is attained by a process causing a reduction of the illuminating power below that of mantles previously known.

Commenting on this in the *Welsbach Incandescent Gas Light Company v. the New Incandescent Company*, (e) Buckley, J., said: "Now, utility in patent law does not, as I understand it, mean either abstract utility, or comparative or competitive utility, or commercial utility. It was described by Grove, J., in *Young v. Rosenthal*, (f) as meaning an invention better than the preceding knowledge of the trade as to a particular fabric. I adopt this definition if the word 'better' be understood as meaning better in some respects and not necessarily better in every respect; so that, for instance, an article which is good, though not so good as that previously known, but which can be produced more cheaply by another process, is better in that it is better in point of cost, although not so good in point of quality. So here I conceive that a mantle constructed, according to prescription No. 1, of thorium pure, according to the knowledge of 1886, and which gave only 3 candles, or pure in fact, according to the knowledge of to-day, and giving only 1.3 candle, although worse as an illuminating appliance than the mantle of 1885, which gave 4 or 4.5 candles, was nevertheless better if it possessed in a greater degree the qualities of rigidity, durability, or stability. I may illustrate this by saying that, in point of fact, subsequent knowledge has shewn that it was useful, because by the subsequent discovery that a small percentage of cerium will increase its luminosity, the step which was taken in 1886 has led to the possibility of making subsequently, in 1893, a mantle which is not only durable and stable, but possesses also high illuminating power. Again, I may take another test of utility, namely, that an invention is useful for the purposes of the patent law, when the public are thereby enabled to do something which they could not do before, or to do in a more advantageous manner something which they could do before, or, to express it in another way, that an invention is patentable which offers the public a useful choice."

(e) 17 R. P. C. 237; 16 T. L. R. 205.

(f) 1 R. P. C. p. 34.

The Utility required is the Utility of All.—Although a slight amount of utility will support a patent, all that the patentee distinctly claims must be useful. If anything claimed by him as essential is useless, the patent will be void. For, as in the case of novelty, the consideration for the grant is the utility of all claimed, and it is a consideration which is whole and indivisible. Therefore if bad in part it is bad in all. (g)

In *Morgan v. Seaward*, (h) Park, B., said: "This brings me to the question whether this patent, which suggests that certain inventions are improvements, is avoided if there be one which is not so. And upon the authorities we feel obliged to hold that the patent is void, upon the ground of fraud on the Crown, without entering into the question whether the utility of each and every part of the invention is essential to a patent where such utility is not suggested in the patent itself as the ground of the grant. That a false suggestion of the grantee avoids an ordinary grant of lands or tenements from the Crown is a maxim of the common law; and such a grant is void not against the Crown merely, but in a suit against a third person." (i)

In the *United Horseshoe and Nail Company v. The Swedish Horse Nail Company*, (j) Lord Kinneir said: "The respondents particularly maintain that the patent is void, because it claims an invention which is altogether useless, and I think, upon the decisions, this contention is well founded. The defect might no doubt be remedied by disclaimer, but it appears to me settled by the case of *Templeton v. Macfarlane*, (k) and others in the same direction that while the sixth claim stands as a separate and distinct claim for a meritorious invention, the patent cannot be sustained. It is said that if a patent be taken out for a good and new invention it shall not be invalidated because the specification includes some minor claim which turns out not to be useful, provided there be no concealment, and that is a perfectly sound proposition; but the result of the decisions appears to be that the question must always be whether the useless part of the process or apparatus described is set forth in the patent as a separate invention, and, therefore, as a consideration for which the patent is granted; and, in considering the patent, I am unable to arrive at any other conclusion than this, that the patentee does set forth this very minor invention as part of the consideration for which

(g) See ante, p. 17.

(h) 2 M. & W. 561; 1 W. P. O. p. 196.

(i) See, also, *Travell v. Carteret*, 3 Lev.

135; *Alcocke v. Cooke*, 5 Bing. 340.

(j) 6 R. P. O. 8.

(k) 1 H. of L. Ca. 595.

he is to get his patent right, and, so long as that stands, I am unable to resist the effect of the decisions."

Utility not Required in a Non-essential Part.—But a want of utility in some part of a machine which is not essential will not vitiate a patent for the whole.

In *Lewis v. Marling*, (l) an objection was taken that the patentees claimed as part of their invention "a proper substance to brush the cloth," and directed plush to be used for that purpose; which brushing contrivance was useless. Subsequent to the filing of their specification the patentees had discovered that the brush could be dispensed with, and, in fact, was not necessary to the end in view; and it was proved that out of some thousand machines sold by them none had this apparatus attached. The objection was not allowed to prevail. Lord Tenterden, C.J., said: "As to the objection on the ground that the application of a brush was claimed as part of the invention, adverting to the specification it does not appear that the patentee says the brush is an essential part of the machine, although it is an invention. When the plaintiff applied for the patent, they had made a machine to which the brush was affixed, but before any machine was made for sale they discovered it to be unnecessary. I agree that if the patentee mentions that as an essential ingredient in the patent article which is not so, nor even useful, and whereby he misleads the public, his patent may be void; but it would be very hard to say that this patent should be void because the plaintiffs claim to be the inventors of a certain part of the machine not described as essential and which turns out not to be useful."

Where Several Claims, all need not be Equally Useful.—So likewise it is no objection to a patent claiming several things to shew that all the claims are not of equal utility, provided each separate claim contains some utility. And where the patentee claims several things, some of which are obviously useful, the Court will be disposed, if it can reasonably do so, to ascribe utility to the more doubtful claims, or to construe them as subsidiary to the main invention. (m)

"It is very old patent law," said Kekewich, J., in *Ehrlich v. Ihlee*, (n) "that in construing different parts of the claim where you have general utility, that is, utility of the invention as a whole, you are not bound to prove that each part is equally useful. Nor is it

(l) 1 W. P. C. p. 495; 10 B. & C. 25.

10 B. & C. 22; 1 W. P. C. 493.

(m) *Badische v. Leivinstein*, 4 R. P. C. 449 (per Lord Herschell); *Lewis v. Marling*,

(n) 5 R. P. C. 203.

a fatal objection to a patentee's claim that one part has in practice not been found to be so useful as the others, so that it has dropped out of commercial use."

In *Siddell v. Vickers*, (o) the plaintiff's patent was for an appliance for operating upon large forgings. In his specification the plaintiff claimed three processes which, though capable of combination, had for some purposes to be treated separately. One was a process by which a lever was worked by means of attachment to the crane-wheel above it, and this was clearly useful. The defendants themselves had used and were using it. The other two processes presented some difficulty. One of these, called the gas-tongs arrangement, had never been worked, and was said by the defendants to be useless. The other, the automatic action of the wheel, endless chain, and lever, had been but little used and was also alleged to be useless. At the trial, Kekewich, J., came to the conclusion that the real objection to the patent was that two of the processes were not so useful as the third, and held there was sufficient utility in each of the three processes, and, on appeal, the judgment below was affirmed.

In this case there was no evidence to shew that either of the processes objected to as lacking in utility could not be put into practical operation. The only question was, Could they be so worked as to be commercially useful? On this the learned judge said: "There is a doubt on the evidence whether the automatic action is of practical value, and some of the defendant's witnesses, men of great experience and learning, whose opinions are entitled to the highest credit, think that it is not. They are met by opinions weighty, if not of equal weight, on the other side; but I have, in addition to those opinions, the uncontradicted statements of a witness fully competent to use his eyes and to form conclusions, and he saw this machine work. *Dr. Hopkinson* tells me that he witnessed the automatic action attempted at the defendant's works, and that it did turn an ingot 'to a sensible degree'—'to an extent' as he explained it, 'that it might be very useful in the press.' From the same witness and others I must conclude that the gas-tongs arrangement, as it has been styled, will work; and though the circumstances under which it might be conveniently applied are not likely to frequently occur, so that this arrangement will probably not be a large addition to the practical information of manufacturers, yet it seems impossible to say that it will not work, or that if and when those circumstances do occur, it might

not usefully be applied to them. Both these processes, as well as the other, secure freedom from that danger which appertained to the old porter-bar arrangement. Both are more or less portable, that of the automatic action being quite as portable as that where the lever is worked by a crane, and the automatic action, certainly the gas-tongs arrangement, probably shares with the one last mentioned the enormous advantage of economy. The evidence that, by means of the plaintiff's processes, that is, by all except the gas-tongs arrangement, which has not been put into practice, the employment of many hands, and consequently the payment of large wages, is avoided, is overwhelming, and, indeed, not attempted to be denied."

The Utility Required is the Utility Suggested by the Patentee.— At the same time, the utility required is utility for the purpose for which the invention is designed. Usefulness only for some other collateral purpose is not sufficient. If the patent is taken out for one thing it will not save it to shew that it is useful for another. (p) Hence, if an inventor claims that his invention is capable of a far wider application than is in fact the case, its utility to a limited extent will not in such case save the patent from being invalid.

In *Easterbrook v. The Great Western Railway Company*, (q) the patent related to improvements in apparatus for actuating railway points or signals. It was proved that, though useful in application to points that were simple, where the points were complex the invention could not be relied on, and its employment was in fact fraught with danger to the public. On this Wills, J., said: "The specification here points to its universal application for railway signalling, including its use at the most complicated junctions and sidings. If it be useful for one very small and insignificant section of its proposed work, and for the rest is, as in my opinion it is proved to be, fraught with danger and death, the specification is bad, as not distinguishing between its useful and useless application. It is as consonant with good sense as I believe it to be good law, that an inventor who invites the indiscriminate use of apparatus sure to bring about disaster in the long run, if generally applied according to his invitation, cannot maintain a patent for his invention because it will do some useful work at places, and under circumstances where mechanical appliances for preventing conflict of signals are scarcely necessary at all, whilst elsewhere it is full of danger to the public."

(p) *Cornish v. Keene*, 1 W. P. C. 506 (per Tindal, C.J.).

(q) 2 R. P. C. 201.

How far Non-user is Evidence of Want of Utility.—The fact that an invention when known has not come into use, or has after use been abandoned by the patentee himself, is strong presumptive evidence of want of utility.

In *Hinks v. the Safety Lighting Company*, (r) Jessel, M.R., said: "The thing itself" (a duplex burner for lamps) "may not be useful at all, and I am not sure that it is. . . . The reason why I am not sure is that it was never put in practice. I cannot understand a practical lamp-maker not putting in practice a useful burner for so many years. That is my reason for doubting its utility, and I very strongly doubt it."

The non-user or abandonment of an invention is not, however, conclusive proof of want of utility. In the case of *Otto v. Linford*, (s) this matter was discussed in the Court of Appeal. Jessel, M.R., said: "The next objection is that there was no evidence of utility. That is an objection of the most moderate kind. It is quite true that it has been said that it is *prima facie* evidence of want of utility if you do not make and vend your machine; but that is subject to this observation, that you may make and vend an improvement upon it, and if you have found immediately after you have patented your invention that it can be improved, it does not by any means shew that the first invention was useless. In *Renard v. Levinstein*, (t) I was counsel for the defendant, and took the same objection. That was an invention for a dye. There the plaintiffs never sold an ounce of dye made according to the patent, because immediately afterwards the inventor had discovered an improvement, and they had always sold the improved dye, and they were obliged to call a witness and shew they had made a few ounces of dye and tried it, and that it would dye. The answer was that under the circumstances the mere fact of not selling the original dye was nothing at all. In this case we have a rather stronger illustration, because the inventor has patented three modifications, and it turns out that what he had used, made, and sold, have been almost entirely No. 3's, and that the other things sold have been almost entirely—not quite—improvements on No. 1. No. 1 itself does not appear ever to have been sold; but the plaintiff says that No. 1 will work, and he calls witnesses to prove it, and there is no evidence on the other side. Of course nothing could

(r) L. R. 4 C. D. p. 616; 36 L. J. Ch. p. 394; see also *Macnamara v. Hulse*, Car. & M. 471; 2 W. P. O. 292.

(s) 46 L. T. (N. S.), 35, p. 41.

(t) 11 L. T. (N. S.), 505; 2 H. & M. 628; 13 W. R. 382.

have been easier for the other side than calling witnesses who had made machines according to No. 1; therefore, there is evidence of utility."

In the *United Telephone Company v. Bassano*, (u) it was contended by the defendants that a portion of the plaintiffs' invention had never been used by them, and was in fact useless. On this North, J., said: "The third point raised may be very shortly disposed of. It is that Edison's invention, especially the tension regulator portion thereof, is not commercially useful, and has never been in actual use. If this be so, it does not follow necessarily that the patent is bad. Lord MacLaren disposed of that argument by saying, (v) "It does not appear that any of the mechanical combinations described in the specification came into commercial use, probably, because as may happen in the history of even the most original and valuable inventions, these were immediately superseded by simpler constructions involving the same principle."

In *Erlich v. Ihlee*, (w) where the patent was for "improvements in mechanical musical instruments," the patentee claimed—1: A rotative music sheet, consisting of a perforated disc, formed to co-operate with valve levers; 2. The same disc, but formed in two parts, so that a longer piece of music might be played (by means of changing the half-discs while the instrument was in operation) than could be compressed into a single undivided disc.

It was contended that the second claim was bad for want of utility, on the ground that the device for changing the half-discs so as to play a longer piece of music, could not be worked in practice; and that, therefore, the patent was bad. It was shewn, by a practical experiment, that the half-discs could be made to work. But it was proved that they had not been a commercial success, and that there was no demand for this form of the machines by the public.

Cotton, L.J., in refusing to adopt this objection to the patent, said: "It was said that, in fact, these half-discs had not been sold. Well, they have not been. They have not been a commercial success; but that is not necessary. In my opinion, it is not necessary, in order to support a patent, to shew that all that is claimed is commercially a success. If it can be practically used, a very little utility is sufficient to prevent its being said that there has been a deception practised by taking this part of

(u) 3 R. P. O. 313.

Maclean, 9 R. 710.

(v) See *United Telephone Co. v.*

(w) 5 R. P. O. 198 and 437.

the invention—the invention communicated to the public being the consideration in respect of which the monopoly is granted.” (x)

On the same point, Bowen, L.J., after commenting on the experiments under claim two, and the inconvenience which appeared to attend the use of the semi-circular discs, referred to the fact that it was now possible to get longer pieces of music into circular discs than had formerly been supposed possible, and laid some stress on this in construing the doubtful claim. His lordship said: “The truth is, that with regard to this second claim and its utility, it is impossible to forget that, owing to the progress in the manufacture of these instruments, it has been found easy and practicable to compress into one whole circular disc, most of the music which it is desired to play in these instruments. But, nevertheless, there are pieces of music, I dare say, which would not easily be compressed within the compass of the circular disc, and it may be true that, for the purpose of the more extensive pieces of music, the use of semi-circular discs would be necessary. The real truth is, that for the fair construction of this specification, the second claim is one which, from its very character, and the progress of the manufacture, has become what I may call subsidiary and accidental; and I think very little utility, therefore, need be proved to make this second claim good, and to prevent its being held to be a deception of the Crown.” After quoting *Otto v. Linford*, the learned Lord Justice proceeded: “I think the second claim points out a mode of using this novel and useful machine which widens the beneficial result you obtain, and enables you—I agree, at some sacrifice, it may be, of convenience—but still enables you, in the instrument, to deal with cases which it otherwise would not cover; and, on that ground, I think the second claim ought to be supported.” (y)

In *Edison v. Holland*, (z) it was contended, on behalf of the defendants, that the plaintiff's patent was bad, because no successful incandescent lamps had ever been made according to the specification. It appeared from the evidence that, owing to subsequent improvements in the process, this, in fact, was so. The Court of Appeal, however, declined to recognize this as proof of absence of utility. Cotton, L.J., said: “A patent is not to be defeated simply because subsequent inventions improve the patented article, or because, in consequence of subsequent improvements, no article was, in fact, made in accordance with the specification.”

(x) 5 R. O. P. p. 450.

(y) *Ibid.* p. 455.

(z) 6 R. P. C. 243, p. 277.

Public Appreciation is Evidence of Utility.—It is evidence of the utility of an invention to shew that the public have appreciated its value, and that large sales have been effected. (a)

In *Cornish v. Keene*, (b) Tindal, C.J., said: "It is an observation not to be lost sight of, that the No. 3 article is one which, according to the testimony of this witness as well as another, has had an extensive sale, and by having had an extensive sale, we are at liberty to ask ourselves how it obtained that; and, although certainly the circumstances of its being considerably cheaper would go a great way to account for that, it would not go the whole way. Therefore, you must ask yourselves whether, in making braces, garters, and other articles for which this web was originally intended, and before the improvement was applied by the public, this has made an improvement upon it before the patent was applied, and is more beneficial and useful to the public than the other was."

In *Ehrlich v. Ihlee*, (c) Cotton, L.J., discussing the question of the utility of the invention, said: "One great point in its favour is this, that, on the evidence, since this machine has been introduced an enormous number have been sold, and the old machines, which worked by the bands, have become a drug in the market; and to those who delight in such musical instruments, there can be no greater proof that this invention was useful, taken as a whole." And in *Cole v. Saqui*, (d) Kekewich, J., said: "When a man proves that, in the course of, I think, rather less than two years, he has sold 5448 dozens of this new toy--sold, I think we are entitled to assume, for the amusement of those for whom it is intended—I think that is strong evidence of utility, and conclusive until it is contradicted."

Commercial Value not Essential.—At the same time, an invention may be useful in the sense that will support a patent, although, at the time of the discovery, it cannot be made immediately commercially valuable.

In *Badische v. Levinstein*, (e) Lord Herschell said: "I do not think it is a correct test of utility to inquire whether the invented product was, at the time of the patent, likely to be in commercial demand, or capable of being produced at a cost which would make it a profitable speculation to manufacture it. The demand for a particular colour depends upon changing fashion and passing

(a) *Tetley v. Easton*, Macr. P. O. 63.

(b) 1 W. P. O. pp. 506, 507.

(c) 5 R. P. O. 449.

(d) 5 R. P. O. 495.

(e) 12 App. Ca. p. 719; 4 R. P. O. p. 466. Cf. *Kekewich, J., in Siddell v. Vickers*, 5 R. P. O. 96.

moods of fancy. The one which to-day may be in large demand, may to-morrow be a drug on the market. Again, a process which, at one time could not be worked at a profit on account of the expense of the materials employed, may shortly afterwards be so worked by reason of a diminution in the cost of those materials. Is the person who patents such a process to be deprived of all benefit of his invention when it becomes a commercial success, because at the time the patent was granted it could not be worked at a profit? There are abundant perils already in the path of every inventor, and I am not disposed to add to their number unless compelled to do so."

On the same point Lord Halsbury, C., expressed a similar opinion. "The element of commercial pecuniary success has, as it appears to me, no relation to the question of utility in patent law generally, though, of course, where the question is of improvement by reason of cheaper production, such a consideration is of the very essence of the patent itself, and the thing claimed has not really been invented unless that condition is fulfilled." (f)

In *Edison v. Holland*, (g) Cotton, L.J., in refusing to admit commercial value as a test of utility, said that commercial utility was a new term in patent law.

"A patent," said Charles, J., in *Wilson v. Union Oil Mills Company*, "may be a patent for a useful article; it may satisfy the condition of utility, although it may be so expensive as to be commercially useless. That is not the test at all. The question is, does it do, when put in practice by a competent man, what it assumes to do? That is the test of utility." (h)

(f) 4 R. P. C. p. 462; 12 App. Ca. p. 712.

(g) 6 R. P. C. 257.

(h) 9 R. P. C., p. 70.

Specimen drawing for Specifications.

Border line $\frac{1}{2}$ an inch from edge of paper.

A. D. 18.....

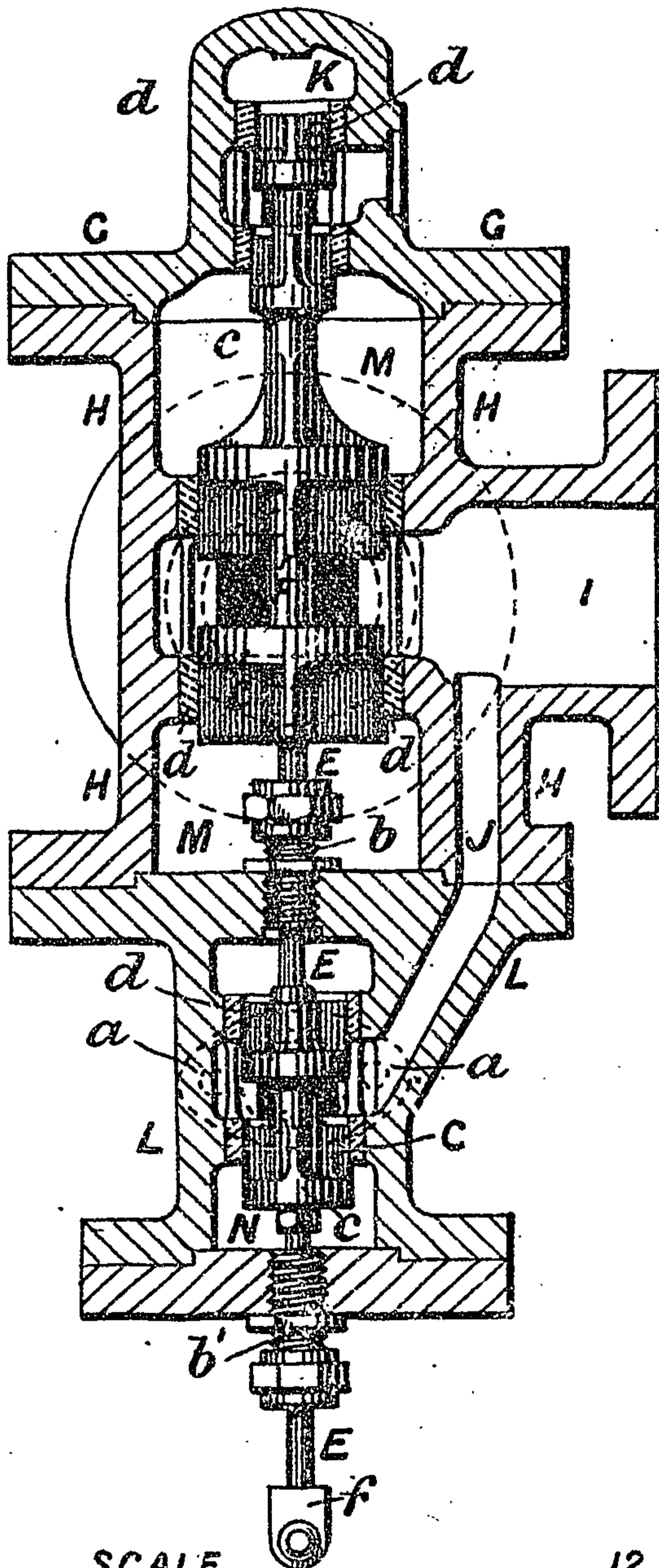
No.....

(..... Sheet.....)

Smith's Specification.

Sheet.....

FIG. 1.



INS. 0 SCALE. 12 INS.

Gas Smith (Applicant)
or Jones & Co.
Agents for Applicant.

Border line $\frac{1}{2}$ an inch from edge of paper.

Size of paper for Specification drawing. { 13 inches by 8 inches. or 13.....16 inches.

Border line $\frac{1}{2}$ an inch from edge of paper.

Border line $\frac{1}{2}$ an inch from edge of paper.

CHAPTER IX.

ALL SUBJECT-MATTER MUST BE THE RESULT OF INVENTION.

Invention Necessary.—It is not every new and useful manufacture which can be made the subject of a patent monopoly. To be patentable, a manufacture must not only be useful and new in the sense of not having been done before, it must also be new in the sense of lying sufficiently outside the beaten track to make it not a matter of course that the public sooner or later would have stumbled upon it without the aid of an inventor. It must not be something which would naturally suggest itself to any one using an invention already known, from the use of that invention. (a) It must be something found out which is not included in the already existing stock of public knowledge upon the subject with which it deals. It must be something which a person of average intelligence possessed of that knowledge could not have done without the exercise on his part of a special ingenuity. (b) It must mean a difficulty overcome; (c) in a word, it must be the result of independent invention. (d)

The word "invention" is not to be found in the Statute of Monopolies; (e) its use, however, as applied to the subject-matter of monopolies is older than that Act. In *Darcy v. Allin* (f) the famous case of monopolies, it is laid down that a monopoly may lawfully be granted to any man who brings any new trade into the realm by his own wit or invention; while in the case of

(a) *Vickers v. Siddell*, 7 R. P. C. p. 305; *Blakey v. Latham*, 6 R. P. C. 187.

(b) For this purpose the knowledge prevailing in a kindred trade is material. See *Shaw v. Barton*, 12 R. P. C. 282.

(c) *Williams v. Nye*, 7 R. P. C. p. 67.

(d) *Morgan v. Windover*, 7 R. P. C. pp. 134, 137.

(e) The word "Invention" in the Patents Act, 1883 (see s. 46), means any manner of new manufacture, the subject of letters patent and grant of privilege within s. 6 of the Statute of Monopolies. See *Gadd v. Mayor of Manchester*, 9 R. P. C. 524.

(f) *Noy*, 182; see ante, p. 5.

the *Clothworkers of Ipswich* (g) it is said that a monopoly may be granted of a new invention. The requirement that a grantee of valid letters patent must have exercised inventive ingenuity is therefore incorporated in the Statute of Monopolies by the proviso saving the pre-established rules of the common law.

That the rule of law requiring ingenuity in every patented invention is well founded in reason, is also apparent from the circumstance that patent monopolies are only supported by the law as an encouragement to enterprising persons to find out new devices beneficial to the trade and industrial prosperity of the country. Manifestly this whole purpose would be frustrated if a patent might be granted for an invention "so easy that any fool could do it," to use the words of Lord Esher, M.R., in the *Edison Phonograph Company v. Smith*. (h) To encourage such inventors would not promote, but only hamper and impede industrial progress by conferring exceptional privileges on persons who had not earned them by any exceptional merit.

There can then be no subject-matter for a patent where there is not something invented. In one sense, no doubt, to say that there must be some invention is only another way of saying that there must be novelty in what the patentee claims to monopolise; and inasmuch as a "manufacture" may be new in the popular sense, and yet not patentable, the test of invention was at one time applied by the Courts usually as a means of ascertaining whether or not a manufacture was new within the meaning which the patent law attaches to that word.

It will, however, be more convenient to consider the subject of invention under a separate heading than to treat it merely as a branch of the subject of novelty, as the tendency in all the later decisions has been to regard invention as a distinct and essential characteristic.

The question whether or not any alleged discovery so involves invention as to make it good subject-matter, is in all cases a question of fact. (i)

In *Lyon v. Goddard*, Bowen, L.J., thus laid down this proposition: "The question whether there is ingenuity in the matter of a patent is a question of fact. Has there been an exercise of the inventive faculties? That depends on a true view of all the circumstances, and it cannot be governed, in any one case, by a finding of fact on a totally different invention, by a

(g) Godb. 252.

(h) 11 R. P. O. 398.

(i) *Lyon v. Goddard*, 10 R. P. O. p.

334.

tribunal like the House of Lords. We must apply our mind to the specific facts in the case before us; and nothing is more pernicious or likely to lead the Court astray, than when it has to decide a question of fact in one case to wander into another case; to look at the decision of fact in that case, and then to see what differentiations there can be between the facts in the cited case and the one before the Court. The Court that travels on these lines always goes wrong." (j)

Invention means more than Novelty.—Mere novelty in the popular sense, then, will not support a patent; there must, in addition, be some difficulty overcome.

In *Britain v. Hirsch*, (k) the patent was for a mechanical top, in the form of a ballet girl or other figure, with a spinning mechanism within. It was argued that this was new, and, therefore, good subject-matter. The Court of Appeal declined to adopt this view. "I do not agree," said Cotton, L.J., "with the view that when anything is done which has not been done before, that is sufficient to justify a patent being obtained for it. In my opinion, it must be a question of whether there is sufficient invention to justify a monopoly being granted by the Crown in the particular thing."

In *Lane Fox v. Kensington, &c., Lighting Company*, (l) Lindley, L.J., said: "An invention is not the same thing as a discovery. When *Volta* discovered the effect of an electric current from the battery on a frog's leg he made a great discovery, but no patentable invention. Again, a man who discovers that a known machine can produce effects which no one knew could be produced by it before, may make a great and useful discovery, but if he does no more, his discovery is not a patentable invention. (m) He has added nothing but knowledge to what previously existed. A patentee must do something more; he must make some addition, not only to knowledge, but to previously known inventions, and must use his knowledge and ingenuity so as to produce either a new and useful thing or result, or a new method of producing an old thing or result. On the one hand the discovery that a known thing—such, for example, as a *Planté* battery—can be used for a

(j) 10 R. P. C. pp. 345, 346.

(k) 5 R. P. C. 226. See, also, *Cole v. Saqui*, 6 R. P. C. p. 44, "There must be some ingenuity in that which is new" (per Lindley, L.J.).

(l) 9 R. P. C. 416; [1892] 3 Ch. p. 428; 67 L. T. 440.

(m) *Britain v. Hirsch*, 5 R. P. C. 226 (at 232); *Harwood v. Great Northern Railway Co.* 11 H. L. C. 654; *Horton v. Mabon*, 12 C. B. (N. S.), 437; *Saxby v. Gloucester Waggon Co.* L. R. 7 Q. B. D. 305.

useful purpose for which it has never been used before, is not alone a patentable invention; but, on the other hand, the discovery how to use such a thing for such a purpose will be a patentable invention if there is novelty in the mode of using it as distinguished from novelty of purpose, or if any new modification of the thing or any new appliance is necessary for using it for its new purpose, and if such mode of user, or modification, or appliance involves any appreciable merit. It is often extremely difficult to draw the line between patentable inventions and non-patentable discoveries." (n)

In *Riekmann v. Thierry*, (o) Lord Halsbury, in the course of the argument in the House of Lords, said: "A thing may be new, but unless it has some invention it is not patentable." (p) And Lord Davey, in the same case, in dealing with the argument of counsel for the patentees, said: "If the learned counsel meant only that a new and useful article, in the production of which there is invention, is the proper subject of a patent, I suppose nobody will disagree with him. But if he means that an article which is new to the market is, therefore, proper subject-matter for a patent, irrespective of the question whether the production of it was the result of invention, I do not agree, and I am of opinion that it is not the law." (q)

In *Gadd v. The Mayor of Manchester*, (r) the plaintiff's invention consisted in the application of a contrivance of chains and pulleys to the bottom of a gasometer so as to secure that the bottom edges should rise evenly as the gasometer filled, and prevent it leaning out of the perpendicular and losing its stability. This object had formerly been attained by the erection of an outside framework, in which the gasometer rose and fell. It was proved that the plaintiff's contrivance was already known in connection with pontoons and floating docks, and argued that its application to gasometers was so analogous to the known use as not to be subject-matter for a patent. But the Court of Appeal (reversing Kekewich, J.) held that the practical difficulties to be overcome in the application of this known contrivance to gasometers were such as to involve experiment even by a skilled person; to require, in fact, invention, and that the plaintiff's patent was good subject-matter. Lindley, L.J., said, "A patent for the mere new use of a known contrivance, without any additional ingenuity in overcoming fresh

(n) See, also, *Moser v. Marsden*, 10 R. P. C. 358.

(o) 14 R. P. C. 105.

(p) *Ibid.* p. 114.

(q) *Ibid.* p. 121.

(r) 9 R. P. C. 516.

difficulties, is bad, and cannot be supported. If the new use involves no ingenuity, but is in manner and purpose analogous to the old use, although not quite the same, there is no invention; no manner of new manufacture within the meaning of the Statute of James. On the other hand, a patent for a new use of a known contrivance is good, and can be supported if the new use involves practical difficulties which the patentee has been the first to see and overcome by some ingenuity of his own.^(s) An improved thing produced by a new and ingenious application of a known contrivance to an old thing, is a manner of new manufacture within the meaning of the Statute. . . . If, practically speaking, there are no difficulties to be overcome in adapting an old contrivance to a new purpose, there can be no ingenuity in overcoming them, there will be no invention, and the first rule will apply. The same rule will, I apprehend, also apply to cases in which the mode of overcoming the so-called difficulties is so obvious to every one of ordinary intelligence and acquaintance with the subject-matter of the patent, as to present no difficulty to any such person. Such cases present no real difficulty to people conversant with the matter in hand, and admit of no sufficient ingenuity to support a patent. If, in these two classes of cases, patents could be supported, they would be intolerable nuisances and would seriously impede all improvements in the practical application of common knowledge. They would be mischievous to the State, to use the expression in the Statute of James.”^(t)

In *Nicoll v. Swears*,^(u) the invention was for a safety skirt in ladies' riding-habits. A safety skirt with a burstable seam part of the way up, so contrived that if the seam caught in the pommels it would burst and release the habit, had been patented before. The plaintiff's alleged invention was a skirt with a burstable seam the whole way up, so contrived that if the rider were thrown and the skirt caught on the pommels the seam would yield and the rider fall clear of the skirt. On this Wright, J., said:^(v) “It is a mere discovery demonstrative of a perfectly old and perfectly obvious contrivance used for the very purpose to a certain extent, but used more usefully for the old purpose than was known before. That is not enough to constitute an invention. At most it was a discovery that this old contrivance for an old purpose worked better if it was carried a little further,

^(s) See *Williams v. Nye*, 7 R. P. C. 67.

^(t) 9 R. P. C. p. 524.

^(u) 10 R. P. C. 240.

^(v) *Ibid.* p. 244.

and if it entirely released the lady from the skirt instead of releasing the skirt from the pommel. I do not think that is sufficient matter for a patent."

If Invention is proved the Amount is not Material.—In determining whether or not a discovery is patentable, the Court, if satisfied that some independent invention has been required to accomplish it, will not enquire minutely into the amount of labour or the degree of ingenuity involved; any substantial (*w*) exercise of the inventive faculty is enough.

In *Liardet v. Johnson*, (*x*) Lord Mansfield said that inventions were of various kinds; some depended on the results of figuring, others on mechanism, etc., others depended on no reason, no theory, but a lucky discovery; and that water-tabbies were discovered by a man spitting on the floor.

Similarly in *Crane v. Price*, (*y*) Tindal, C.J., said: "In point of law the labour of thought, or experiments, and the expenditure of money are not the essential grounds of consideration on which the question, whether the invention is or is not the subject of a patent ought to depend. For if the invention be new and useful to the public, it is not material whether it be the result of long experiments and profound research, or whether of some sudden and lucky thought, or mere accidental discovery."

Likewise in *Muntz's Patent*, (*z*) Lord Brougham said: "Some of the most important inventions that have been made by the result of experience and ingenuity, applied to practical subjects, have been made with the utmost simplicity, to the greatly increased benefits of mankind."

In *Murray v. Clayton*, (*a*) James, L.J., said: "The machine, too, when produced, is so simple, and so completely adapted to effect its object, that one feels disposed to wonder how people could have gone on for thousands of years making bricks without ever having thought of it; but that is the case with many noted inventions—when the thing is once hit it seems a marvel that it was not hit before."

In *Otto v. Linford*, (*b*) Jessel, M.R., adverting to the objection that the plaintiff's invention was too simple to support a patent, said: "It may appear very simple when it is known; most great inventions do appear to be very simple when they are known."

(*w*) Per Cotton, L.J., in *Williams v. Nye*, 7 R. F. C. 67. 87; 4 M. & G. p. 605.

(*z*) 2 W. P. C. 119.

(*x*) Bull, N. P. 76. See, also, *Boulton v. Bull*, 2 H. Bl. 487.

(*a*) L. R. 7 Ch. 583.

(*b*) 46 L. T. (N. S.), 39.

(*y*) 1 W. P. C. 411; 12 L. J. C. P. p.

In *Vickers v. Siddell*, (c) a case where the patent, though on the border line, was held good, Lord Herschell said: "If the apparatus be valuable by reason of its simplicity, there is a danger of being misled by that very simplicity into the belief that no invention was needed to produce it. But experience has shewn that not a few inventions, some of which have revolutionised the industries of this country, have been of so simple a character that when once they were made known it was difficult to understand how the idea had been so long in presenting itself, or not to believe that they must have been obvious to every one."

Again, in *Riekman v. Thierry*, Lord Halsbury, C., said: "It is certainly quite true that mere simplicity will not prevent there being invention. It is often justly urged in favour of a patent that its very simplicity is the merit of the invention;" and again, "No smallness or simplicity will prevent a patent being good." (d)

In *Hayward v. Hamilton*, (e) the Court of Appeal went further than has perhaps been done in any other case in supporting a patent the validity of which was challenged for want of invention. (f) There the patent was for improvements in pavement lights. The object of the invention was the lighting of rooms from above which were not immediately under the lighting apertures, but which had windows facing into a covered area, from the roof of which the light came. For this purpose it was necessary to throw the rays of light sideways. This was achieved by the use of glass in prismatic form, through which the light was deflected at an angle so as to fall into the chamber which it was desired to light. It was objected that the prism was old, and the frame-work old, and that there was no invention in the combination. The use of the prism let into the decks of ships for the purpose of lighting cabins was relied upon as proof of anticipation; but the Court held that the prism here being used to throw light in a special direction, and being in its shape different from the prism lights let into ship cabins, was the result of sufficient invention to support a patent. Bramwell, L.J., said: "I think the plaintiff is an inventor. I think he has found out and manufactured and patented a thing, an article, namely, a light-directing pavement light. I do not think there is any very great quantity of invention in it; it is not as though a man had set himself down to consider how he could make a sewing machine, or a grain-pressing machine;

(c) 7 R. P. C. 292, at p. 304.

(d) 14 R. P. C. 115.

(e) Griff. P. C. 115.

(f) Per Lopes, L.J., in *Blakey v. Latham*, 6 R. P. C. 189.

it is a much humbler piece of invention than that, and it may possibly be nothing more than that the idea struck him, and immediately the idea struck him he could apply it or carry it into execution by a very obvious apparatus. But still it is an invention, and it is not the less an invention because it required but small inventive powers to enable him to do it. One may take an illustration in this way: the screw propeller. I suppose everybody knew that a screw used as it was would act in the way a screw propeller does; but the man who thought of it, and applied it to a steamboat, which I suppose anybody could have done, if the idea suggested itself to him, would have been called the inventor of a screw propeller, or screw-propelling steamboat, as the case may be. It does not depend upon the quantity of invention." (g)

Tests of Invention: Public Appreciation.—While the mere simplicity of a discovery which in fact involves some invention is no objection to a patent therefor, many cases arise in which the change effected by the patentee is so slight as to make it a matter of difficulty to determine whether or not any inventive ingenuity was required to accomplish it. In such cases the Court will give weight, in favour of the patentee, to the circumstance that a want long felt, and not supplied, has been met by the discovery. (h)

In *Hinks v. the Safety Lighting Company*, (i) where the point of the invention was the substitution of a round for a flat wick, Jessel, M.R., said: "Where a slight alteration in a combination turns that which was practically useless before into that which is very useful and very important, judges have considered that though the invention was small, yet the result was so great as fairly to be the subject of a patent; and, as far as a rough test goes, I know no better."

In *Lyon v. Goddard*, (j) Lord Esher, M.R., said: "When he (the patentee) found it out all mechanics can say at once, 'Dear me, what a simple thing; it did not require any invention for him to do it;' but the answer to that is, and must be always, this—'The thing was wanted; there was a thing which would not do what was wanted; by finding out some small addition I have found out the thing which would do.' That seems to me to be the strongest evidence in point of fact that there was invention, that is, that it

(g) On this case, see *Williams v. Nye*, 7 R. P. C. 67; *Reynolds v. Amos*, 3 R. P. C. 215; *Sharp v. Brauer*, 8 R. P. C. 196.

(h) *White v. Bertram*, 14 R. P. C. pp.

512, 746; *Brooks v. Lamplugh*, 15 R. P. C. p. 48.

(i) L. R. 4 C. D. 615.

(j) 10 R. P. C. 343.

required skill, and it required thought, and that it is the exercise of skill and thought which has produced the new combination." (k)

The mere fact, however, that a patented discovery has at once a large sale is not of itself evidence that there has been invention exercised in the discovery; for such success does not in itself raise any inference that the end accomplished has baffled other persons, and therefore been a matter of difficulty.

Commenting on this in *Longbottom v. Shaw*, (l) Lord Herschell said: "Great reliance is placed upon the fact that when this patent was taken out and frames were made in accordance with it there was a large demand for them. . . . My lords, I do not dispute that that is a matter to be taken into consideration; but, again, it is obvious that it cannot be regarded in any sense as conclusive. I think that its value depends very much on certain other circumstances; if nothing be shewn beyond the fact that the new arrangement results in an improvement, and that this improvement causes a demand for an apparatus made in accordance with the patent, I think it is of very little importance. If it were shewn that the defects which this apparatus is designed to remedy, or does remedy, were defects which had been felt and the knowledge of which had come to the public, so that there was a demand for a new apparatus which did not possess these defects, and if it were shewn that that demand had lasted for a considerable time, so that men's minds were likely to have been engaged upon a mode of remedying those defects, and they were not remedied until the apparatus was devised for which the patent is taken out, no doubt that would have afforded considerable evidence that the adaptation or arrangement of the patentee was not obvious, inasmuch as you would then have a demand for some considerable time not met although known, and the fact that it was not met for a considerable time though known would indicate that the mode by which it was ultimately met could not have been so obvious as otherwise might have been supposed."

Application of Known Process or Materials to a New Use.—At the same time, the application of a known process to a new material, or of an old article to a new use, may be patentable if that application involves invention on the part of the person for the first time applying it.

In *Bamlett v. Picksley*, (m) Blackburn, J., in the Court of Exchequer Chamber, said: "There may be cases in which a thing

(k) Cf. *Legge v. Wakelam*, 10 R. P. O. 379.

(l) 8 R. P. O. 336.

(m) Griff. P. O. 42.

is used which would be identically the old one to produce a new product altogether, but applied to something so totally different that there is an obvious invention in it. Take this example—It was discovered that by taking flour and making it into tough dough by means of machinery you could spin it into a pipe known as macaroni-pipe. An ingenious man, knowing how to spin flour into a pipe, it occurred to him to take red-hot iron and spin that into pipes by machinery in the same way as the flour was spun into a pipe for macaroni. That was not an invention, as it turned out, but had that been so, and had he been able to spin the iron in the same way as the flour was spun into pipes for macaroni, few men, I think, would deny that there was invention there, it being a product so completely new, and that it would be an invention for making a new manufacture which others did not make, because the result was so totally different, even although, in fact, the machinery which was used for the purpose, except that it was made stronger, would be identically the same as the machinery originally used for the purpose of making macaroni.”

In *Penn v. Bibby*, (n) the patent was for an improvement in the bearings and bushes for the shafts of screw and submerged propellers. The invention consisted in employing wood in the construction of the bearings and bushes, in a particular ascertained manner. In an action for infringement this was held good subject-matter. The defendants moved for a new trial, which was refused. On the objection that a new application of an old thing was not patentable, Lord Chelmsford, C., said (*i.a.*): “In every case of this description one main condition seems to be, whether the new application lies so much out of the track of the former use as not naturally to suggest itself to a person turning his mind to the subject, but to require some application of thought and study.” In this case it was alleged against the patent that the contrivance had already been in use in grindstones and water-wheels, and that its use in these was so akin to its use by the patentee that his patent could not be upheld. On this Lord Chelmsford said: “No doubt these have what may be called bearings, but they are of a totally different character and for a totally different object, from the bearings patented. In neither water-wheel nor grindstone is there a wooden bearing in which the wheel revolves; but the wheel is merely supported on wood, not encased nor submerged, nor constructed for the purpose of admitting the water to flow freely within the bearing, and the

(n) L. R. 2 Ch. 136.

revolutions of each of them are at an exceedingly slow pace. It is difficult to believe that bearings of this description could ever have suggested the application of wood to the bearings of screw-propellers in the way described in the patent. It is, to my mind, not merely a different application, but something in itself essentially different. It had been found that, in the mode of constructing screw-propellers by making metal work upon metal, they soon wore out, and occasioned a violent, irregular motion on the vessel. *Mr. Penn* having turned his attention to the remedying this defect, devised the plan of placing fillets of wood upon the inner surface of the bearings, so as to prevent the shaft coming in contact with the metal of the bearings, and so as to admit of the water flowing freely between the shaft and the inner surfaces of the metal bearings, thereby keeping the wood constantly lubricated. The success of this invention has been proved in a remarkable manner, for the revolutions of a screw-propeller being upon an average at the rate of 120 to a minute, the metal bearing very soon wore out with the friction occasioned by this velocity, and yet the wooden bearings of the plaintiff fitted into vessels have continued serviceable without repair for some years. It would be an extraordinary fact if an invention of this kind, so long wanted, and of such great utility, should have been lying in everybody's way who knew anything of the construction of a water-wheel or grindstone, and yet should never before have been discovered."

Mere Analogous Use Negatives Invention.—There is no such invention as will support a patent in the application of a well-known article or process to a use merely analogous to that to which it has already been applied.

In *Losh v. Hague*, (o) the plaintiff claimed protection for the application to railways of a wheel shewn to have been made and used before railways existed. In directing the jury Abinger, C.B., said: "It would be a very extraordinary thing to say that because all mankind have been accustomed to eat soup with a spoon, that a man could take out a patent because he says you might eat peas with a spoon. The law on the subject is this: that you cannot have a patent for applying a well-known thing which might be applied to 50,000 different purposes, for applying it to an operation which is exactly analogous to what was done before. Suppose a man invents a pair of scissors to cut cloth with, if the scissors were never invented before, he could take out a patent for it. If another man found he could cut silk with

(o) 1 W. P. C. 200.

them, why should he take out a patent for that? I must own, therefore, that it strikes me, if you are of opinion that this wheel has been constructed by the persons who have been mentioned long before the plaintiff's patent, that although there were no railways then to apply them to, and no demand for such wheels, yet the application of them to railways afterwards by *Mr. Losh* will not give effect to his patent."

In *Brook v. Aston*, (p) Lord Campbell, C.J., said: "There may be a patent for the application of an old process to a new purpose; but then there must be some invention in the manner in which the old process is applied. . . . Here there is no novelty in the mode of application. The machine is applied in the same manner as before to cotton and linen. Suppose that, in 1853, the machine was, in the first instance, applied to cotton thread only, and a new patent was afterwards taken out for applying the machine in the same manner to a new textile fabric, could such a patent be maintained, the machinery and mode of application being the same? Certainly not."

In *Harwood v. the Great Northern Railway Company*, (q) the leading case upon this subject, the patent was for "improvements in fishes and fish-joints for connecting the rails of railways." The invention consisted in forming a recess or groove in one or both sides of each fish, so as to reduce the quantity of metal at that part, and adapt it to receive the square heads of the bolts, which were thus prevented from turning round when the nuts were screwed on. The use of fishes as supports was old, and so, too, was the use of fishes with grooves or recesses in their outer surfaces; but the use of fishes in this improved form was new in its application to the rails of railways.

The Court of Exchequer Chamber, reversing the Court of Queen's Bench, held that this application was not subject-matter for a patent. Willes, J., said: (r) "It appears that the alleged invention claimed by *Wild* as his, when applied to the pieces of iron used for holding together the ends of rails to make them, for practical purposes, a continuous solid body, had previously been known and used as applied to pieces of iron used for holding together the broad sides of pieces of wood placed vertically upon one another, to make them, for practical purposes, a continuous solid body. In each case the benefit contemplated and effected

(p) 27 L. J. Q. B. 145; 28 L. J. Q. B. 175; 8 E. & B. 478. 35 L. J. Q. B. 27; 14 W. R. 1; 12 L. T. (N. S.), 771.

(q) 2 B. & S. 229; 11 H. of L. C. 654; (r) 2 B. & S. 229; 31 L. J. Q. B. 198.

was effected by means of the groove, which gave lightness with strength to the binding iron, and served to hold the heads of the bolts steady whilst the nuts were being screwed on at the other end. This was the one mechanical contrivance used in each case. It was complete in itself when first invented; and, though not immediately applied, it was immediately applicable to all forms of pieces of iron used for holding together other materials by the aid of bolts having a bearing upon the pieces of iron. It required no new invention, but merely an application of the mechanical contrivance, already invented and used, to employ it upon several strips of iron, to hold together iron instead of wood, materials placed together horizontally instead of materials placed together vertically, solids the small ends of which are in contact instead of solids the broad sides of which are in contact, rails instead of beams."

On appeal to the House of Lords, the decision of the Court of the Exchequer Chamber was affirmed. (s) Lord Westbury, C., said: "Then, my lords, the question is whether there can be any invention of the plaintiff in having taken that thing which was a fish for a bridge, and having applied it as a fish to a railway. Upon that I think the law is well and rightly settled, for there would be no end to the interference with trade and with the liberty of adopting any mechanical contrivance, if every slight difference in the application of a well-known thing should be held to constitute ground for a patent. . . . No sounder, or more wholesome doctrine, I think, was ever established than that . . . you cannot have a patent for a well-known mechanical contrivance merely when it is 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 been hitherto notoriously used. The channelled iron was applied in a manner which was notorious, and the application of it to a vertical fish would be no more than the application of a well-known contrivance to a purpose exactly analogous or corresponding to the purpose to which it had been previously applied."

Commenting on the above dictum in *Elias v. Grovesend Tinplate Company*, (t) Bowen, L.J., said: "Lord Westbury, in *Harwood's* case, which has been cited in the House of Lords, lays down that you cannot have a patent 'for a well-known mechanical contrivance, merely'—and I emphasize that word, because everything turns on the 'merely'—'when it is applied in a manner or to a

(s) 11 H. of L. Ca. 654.

(t) 7 R. P. C. 468.

purpose which is not quite the same, but is analogous to the manner or the purpose in which it has been hitherto notoriously applied.' If you read *Harwood's* case, and observe what was the point raised and decided in the Court of Exchequer Chamber, you will see that the word 'merely' in Lord Westbury's judgment is a compendious mode of stating that it is in a case where there is no novelty in the mode of applying the old contrivance to the new purpose. In other words, 'merely' may be represented in other language by the words 'unless there is invention in the adaptation or mode of application.' That is what 'merely' means. Now, that that is clear appears from all the judgments in the case of *Morgan v. Windover*, (u) in the House of Lords."

So likewise Lord Davey, in *Riekmann v. Thierry*, (v) said the proposition accepted and laid down by the House of Lords in *Harwood v. the Great Northern Railway Company* (w) "was that 'a mere application of an old contrivance in the ordinary way to an analogous subject, without any novelty in the mode of applying such old contrivance to the new purpose, does not make a valid subject-matter of a patent.' The law thus laid down has never since been doubted, though whether it has always been consistently followed or rightly applied may be open to question. It is not enough that the purpose is new, or that there is novelty in the application, so that the article produced is in that sense new, but there must be some novelty in the mode of application. By that I understand that, in adapting the old contrivance to the new purpose, there must be difficulties to be overcome, requiring what is called invention, or there must be some ingenuity in the mode of making the adaptation."

In *Horton v. Mabon*, (x) the plaintiff's patent claimed the application of double angle-iron to the formation of hydraulic joints to telescopic gas-holders. Double angle-iron was well known, and had before been applied to a great number of cognate purposes. The Court of Common Pleas held that the plaintiff's application of it was not valid subject-matter for a patent. Erle, C.J., said: "It appears that those who had heretofore constructed telescopic gas-holders formed the hydraulic joints by riveting two pieces of angle-iron to a plate which formed the top or bottom of the cup. It was perfectly apparent and palpable that double angle-iron would answer the same purpose, and save two rows

(u) 7 R. P. C. 131. See post, p. 150.

(v) 14 R. P. C. 121.

(w) See ante, p. 144.

(x) 12 C. B. (N. S.), 450.

of rivets, and consequently much additional labour. The whole claim of the patentee, therefore, amounts to this—he informs the manufacturers of gas-holders that by the use of an article well known in the iron trade much labour and expense may be spared. That clearly is not the subject of a patent. It is nothing more than the application of a known instrument to purposes analogous to those to which it had before been applied.”

In the same case Willes, J., said: “No doubt a new combination of old machinery or instruments, whereby a new and useful result is attained, may be the subject of a patent. But there must be some invention. There is none here. By making a thing in one piece instead of, as before, uniting several pieces together, the patentee no doubt effects a considerable saving of labour and expense. The merit is due to the person who first produced the article called double angle-iron. That is old and well known, and had long been applied to purposes not dissimilar to that to which the present plaintiff applies it. The mere fact of its application to gas-holders, rendering their construction better or cheaper, does not constitute a subject-matter for a patent.” (y)

In *Tatham v. Dania*, (z) the invention was for a mode of operating on fibrous or textile materials in their passage through a series of rollers used in the process of teasing or opening in such a way that the material was presented in a more suitable form for being teased or opened by the cylinder or following cylinder. It was proved that the use of sets of rollers in a series turning at different rates of speed for the purpose of making materials of a kind similar to those to which the patentee applied his device, pass through in a form more convenient and advantageous for being operated upon by the succeeding part of the machine, was known and used in cotton spinning before this patent was granted.

Willes, J., held that this defeated the patent; the alleged invention being only the application of an old process to another state of things, different only in the circumstances and not in species.

On the necessity of invention, Willes, J., said: “I apprehend if a patentee would succeed it is necessary for him to shew not merely newness in the sense of doing a thing which has not been done before, but that he must shew newness in the shape of novelty by producing a thing which requires some exertion of mind that could properly be called invention. To apply an old tool to a new material could not be the subject of a patent, although all mankind

(y) Cf. *Mackelcan v. Rennie*, 13 C. B. (N. S.), 52.

(z) Griff. P. C. 214.

had been previously using another sort of tool which produced a much inferior effect, and although, therefore, the application of the other tool had the merit in it that it produced a useful result in the easier working of a material to which that tool had not been applied before, but inasmuch as the tool has been used for an analogous purpose to that which all mankind knew it was useful for before, although the application was new you would not say the application was a novelty in the sense of invention so as to sustain a patent."

In *Bamlett v. Picksley*, (a) the same rule was laid down by the Court of Exchequer Chamber. There the plaintiff's patent was for the application to a machine for cutting corn and grass, of a contrivance by means of which the rate of speed in the revolutions of the cutting knife might be varied. It was proved that the same contrivance was already in use on hay-making or tedding machines. The plaintiff's counsel, however, argued that there was sufficient invention in the new application of the device to support the patent. But the Court refused to adopt this view. Blackburn, J., after referring to the contrivance as identical in the two machines, and pointing out that whether it was fitted to a machine to cut grass or to toss hay was immaterial, said: "Counsel endeavoured to argue that there was an invention in this; that although N. discovered the identical way of making the movement he had never applied that to the purpose of reaping and mowing machines, and that it was a new discovery for a man to say, 'that mode which was to cause the wheel to move slowly and quickly applied to one purpose, I will now apply to a new one, and that is a discovery.' I must own it is exactly identical with Lord Abinger's simile: an old broom has been used for sweeping an old carpet, and he said it is no discovery to say now that a new carpet is found out, 'I will apply the old broom to sweep the new carpet.' It is identically the same case—the very same thing." (b)

In *Cropper v. Smith*, (c) the plaintiff's patent claimed (*i.a.*) a floor-plate applied to a lace machine to give rigidity to the frame. This was a common expedient, well known in connection with other machinery. The Court of Appeal, reversing Pearson, J., held that this claim was an independent claim, also that it was not subject-matter, and that the patent was bad. Bowen, L.J., said: "I agree that it is difficult to define the amount of invention

(a) Griff. P. C. 40.

App. Ca. 1079.

(b) See, also, *Bailey v. Robertson*, 3

(c) 1 R. P. C. 81, p. 90.

which is necessary to make a patent good. It is quite true that most machines in these days are new combinations of old parts, and new arrangements of old principles, and that the invention often is in the application; but, on the other hand, it would be a most serious matter for trade in modern times if a familiar arrangement, which was common to other classes of machines, could be patented in its application to a new and analogous purpose. It has been decided that you cannot do that; that you must not take a familiar arrangement, which is well known in one class of machines, and patent it for a new and analogous purpose."

In *Sharp v. Brauer*, (d) the plaintiff's patent was for a new or improved window screen or blind. The device was really the application to a window, for the purpose of excluding light and air, of a screen of ordinary arrangement, commonly used in front of fireplaces. Bacon, V.C., held that the patent disclosed no invention, and was not subject-matter.

In *Blakey v. Latham*, (e) the plaintiff (who sued in his firm's name) was owner by purchase of a patent for an improved heel plate for boots and shoes. The heel plate was so made as to have attached to, and part of itself, the fastening spikes necessary to attach it to the heel of the boot. In this way nailing was dispensed with, and the metal might be worn very thin without becoming detached. These heel plates had had immense commercial success. It was proved, however, that prior to the date of the patent, plates with a turned up edge, having two prongs or nails solidly fastened to the inner surface, were in use on the front part of boots for the purpose of protecting the leather. The Court of Appeal (dismissing an appeal from Kay, J.) held the patent bad as lacking subject-matter. Cotton, L.J., said: "It is not sufficient to be new in the patent sense for the patentee to be the true and first inventor, if it is merely using that which has been used for an analogous purpose, before the date of the patent. Is there any invention in applying what was applied before to the toe of the boot to the heel of the boot? In my opinion, the application to the toe was strictly analogous to what was done here. It may be that these are better than the old ones in their mode of attachment; but the mode of attaching those clinkers to the front of the boot is strictly analogous to the way these plates are annexed to the heel of the boot. In my opinion, therefore, this patent is not good, and there is no proper subject for a patent,

(d) 3 R. P. C. 193.

(e) 6 R. P. C. 29, 184, p. 187.

having regard to what was known before, there being no invention in applying this process to the heel when it had been previously applied to fixing a plate to the toe or front part of a shoe."

In *Morgan v. Windover*, (f) the patent was for improvements in carriage springs. The plaintiff's alleged invention consisted in applying to the front portion of a carriage that substitution of composite for elliptical springs which had already been applied to the hind part. There was admittedly nothing new in the mode of affixing the springs. There was very strong evidence of the utility and advantage of the adaptation so far as the public market was concerned. The Court of Appeal, impressed by this evidence, held the patent good. But in the House of Lords this decision was reversed on the ground that there can be no invention in applying old and well-known contrivances to an analogous use; and that in such a case the utility of the result attained cannot impart a patentable quality to what is not otherwise subject-matter. "It cannot but be certain," said Lord Halsbury, C., "that the Statute of Monopolies, and the whole branch of the law founded on that Statute, make it an absolute condition to the validity of a patent, that there should be what may properly be called invention, and the application of well-known things to a new analogous use is not properly the subject of a patent." (g) In the same case Lord Herschell said: "The law has not been disputed that the mere adaptation to a new purpose of a known material or appliance, if that purpose be analogous to a purpose to which it has already been applied, and if the mode of application be also analogous, so that no inventive faculty is required, and no invention is displayed in the manner in which it is applied, is not the subject-matter of a patent. That I take to be well settled. . . . Now, my lords, if it had required mechanical ingenuity and skill to adapt the composite springs which had heretofore been used in the hind part of a carriage, so that it was not the mere substitution in front, in substantially the same way as the substitution had taken place at the back, but that it needed some skill and ingenuity to adapt to the front part of the carriage that which had been applied to the back. I should have thought that there was sufficient subject-matter, and that the patent could have stood. But when once it is admitted that all that can be claimed as new is the idea of putting it in the front instead of at the back, and that when once that idea was entertained, any workman told to do it would, without any instructions or any

(f) 5 R. P. C. 296; 7 R. P. C. 131, 446.

(g) 7 R. P. C. p. 134.

special mechanical skill, be able at once to do it, it seems to me that that really concludes the case against the respondents, because if their contention be well founded it would certainly be somewhat extensive in its consequences." (h)

There is no such exercise of the inventive faculty as will support a patent in the application to a known purpose of a new material merely analogous to a material previously used for that purpose, *e.g.* the substitution of steel springs for whalebone in the making of ladies' crinolines, (i) or the application of wood planking in the building of ships, to an iron frame, when such planking had been previously applied for the like purpose to a wooden frame. (j)

There is no invention in applying a tap which has been used over and over again to intercept or permit the flow of water, to intercept or permit the flow of wine from a bottle; (k) nor in applying to boiler tubes a hot-water joint well known in its application to coils, although in the one case the heat arises externally from fire, in the other internally from the water. (l) Nor is there any such invention as will support a patent in applying an arrangement of apparatus to water which has already been applied to oil; (m) nor in applying to a bicycle at rest a locking apparatus previously applied to a bicycle in motion. (n)

In *Tickelpenny v. Army & Navy Co-operative Society, Limited*, (o) the plaintiff's patent was for improvements in the construction and support of fire-proof walls and ceilings. The alleged invention consisted in filling hollow iron columns applied to the purpose of support with water, so that they might offer a greater resistance to the heat of fire. Kekewich, J., in holding the patent invalid, said: "It is obvious, and the evidence has established, that hollow columns were well known, and were used for the support of floors and ceilings. Is the user of them when provided with water supply, subject-matter for a patent? I could understand the particular method of supplying water being patentable, and I could understand the application of invention to removing some of the objections to water columns; but what invention is there in using columns filled with water instead of air? The user may be new, but that is not necessarily the subject-matter of a patent.

(h) 7 R. P. C. p. 137.

(i) *Thompson v. James*, 32 Beav. 570.

(j) *Jordan v. Moore*, L. R. 1 C. P. 624; 35 L. J. C. P. 268; 14 W. R. 769. See, also, *Albo-Carbon Light Co. v. Kidd*, 4 R. P. C. 535.

(k) *Hazlehurst v. Rylands*, 9 R. P. C. 8.

(l) *Baker v. Kinnell*, 9 R. P. C. 441.

(m) *Rose's Patents Co. v. Bratby*, 11 R.

P. C. 198, at p. 216.

(n) *Singer v. Rudge Cycle Co.* 11 R. P. C. 463. See, also, the recent case of *Case v. Cressy*, 17 R. P. C. 255.

(o) 5 R. P. C. 405, p. 408.

It is often difficult to draw the line, and say where the invention commences—to say where there is, and where there is not, some novelty in the application. In my judgment there is clearly none in taking a familiar hollow column, and using it full of water instead of air.”

Other Illustrations of Insufficient Invention.—The ascertainment that known parts of a known machine will work best at a particular distance from each other, or when given a differential motion, has been held not to imply the degree of invention requisite to support a patent.

In *Kay v. Marshall*, (*p*) the patent was for a new and improved machinery for preparing and spinning flax, hemp; and other fibrous substances by power. The real point of the discovery lay in placing the retaining and drawing rollers at a particular distance from each other. Before the date of the patent, machinery with a reach varying from less than one inch to thirty-six inches was known. The patentee fixed the reach at two and a half inches. The Court of Common Pleas held that this was not subject-matter for a patent, and the House of Lords affirmed the decision on the ground that there was no invention in what the patentee had done.

A similar point came before the Court in the recent case of *Herrburger v. Squire*, (*q*) In that case the patent was for improvements in pianoforte actions, and the patentee claimed, *i.a.* the method of centering the damper with an arm, as shewn in the figures attached to his specification. The result of this contrivance was to remove the damper from the string, and this had been secured before; there was no new combination of old parts involved in the patentee's contrivance; it was simply an alteration in the radius of the arc in which the damper worked. The patentee had thus described his method of obtaining the greater lifting power from the string: “Instead of the damper being centered in the usual way—that is to say, centered in the body—I use an arm, G, at right angles, or nearly so, and place my centre, K, at the end of the arm, thereby gaining a greater sweep or circle, and bringing the damper-head farther away from the string.” On this Charles, J., said: “Although I appreciate the fact that it is a useful thing to have done, I cannot see that it is the proper subject-matter of a patent, any more than in *Kay v. Marshall* (*r*) it was the

(*p*) 2 W. P. C. 34, p. 84; 8 Cl. & F. 245; 8 L. J. C. P. 261; 5 Bing (N. C.), 492.

(*q*) 5 R. P. C. 592; affirmed on appeal, 6 R. P. C. 194.

(*r*) *Supra*.

proper subject-matter of an invention that the drawing rollers and the retaining rollers of a spinning machine had been altered to a distance from each other at which they had never been placed before. . . . Here there is no new result, no new manufacture; and the only matter which has been invented—if invention is the proper word to use for such a thing—is really the more beneficial adjustment of the working point of the damper, and that does not seem to me to be the proper subject-matter of a patent. It is not the mere fact that something has been done which has never been done before that will support a patent—there must be invention: and a mere alteration of radial distance is not invention.”

In *Ralston v. Smith*, (s) the patentee claimed a process which, by means of rollers and bowls (the rollers having grooves, flutes, or indentations around them, and revolving with greater velocity than the bowls), patterns could be embossed upon fabrics and a finish or lustre added to them by one and the same operation. Before the patent, an engraved roller and a bowl had been used, with equal surface speed, for embossing. For the process of calendering, two rollers or a roller and a bowl had been employed, having different surface speeds; and circular grooves for embossing had also been in use. There was therefore nothing new in the process of embossing with pattern rollers, and nothing new in giving a differential speed to the roller and bowl for the purpose of producing a gloss or finish, nor in the employment of circular grooves. But the plaintiff conceived the idea that the same machine, by means of gearing communicating motion from the roller to the bowl, could be made to produce any kind of pattern, and give a finish to certain fabrics by one and the same operation. After he had taken out his patent he found that his general notion was erroneous, and that only one description of roller, viz. those with circular grooves, could be successfully employed, and he therefore, by a disclaimer, limited his claim to this single application of the machine. The House of Lords held that this was not subject-matter for a patent. “What invention,” said Lord Chelmsford, “was there in all this? The plaintiff does not claim to have invented any new combination of machinery . . . nor has he introduced to the world any new process; but the utmost that he can lay claim to is, that he has discovered that by giving a differential motion to different parts of an old machine, a power existing in it might be developed and

(s) 11 H. of L. Ca. 223. See Lord 49, p. 59. Chelmsford, pp. 255, 256; 35 L. J. C. P.

brought into action. It appears to me that such a discovery is not the subject of a patent."

The exercise of mere adaptive skill and judgment in manufacture is not such invention as will support a patent. (t)

Illustrations of Sufficient Invention.—A person who completes by one step a process which others were on the point of discovering, may have exercised sufficient invention to support a patent. In *Badische Anilin Fabrik v. Levinstein*, (u) Lord Halsbury C., said: "The chief reliance was placed upon an argument as new as it is unsound, and for which I think there is not the least judicial authority. The argument may be stated thus: This thing is not new, because things of the same sort in analogous chemical relations had been discovered; people ought to have discovered it, or were on the brink of discovering it; therefore this true and first inventor, only completed by one step the route to which chemical discoveries had been tending without his aid. Such a principle applied to patent law would be fatal to the rights of all inventors, and is, as I believe, as inconsistent with that branch of our jurisprudence as it is destitute of judicial authority and contrary to the interests of scientific research. The lid of the historical kettle shewed the mechanical power of steam; the action of light on the salts of silver was widely known; and both these things, in one sense, were steps which led up to the discoveries which they brought in their train; but, nevertheless, many true and first inventors proceeded to utilize these steps by further development into inventions which certainly have not been challenged upon the ground now contended for."

A discovery which ascertains what class of substances among many, what temperature in a wide range, and what process among many, will supply the commercial world in merchantable form with an article previously only known as a chemical curiosity, is good subject-matter, and patentable as a new manufacture. (v)

Usually the substitution in a well-known mechanism of a new part, analogous to an old part omitted, will not support a patent; as, *primâ facie*, such substitution imports no invention. But if the patentee can shew that this substitution could not have been effected without the exercise of ingenuity, his patent will be good. In *Ehrlich v. Ihlee*, (w) the defendants contended that the plaintiff's patent was invalid because the inventor had done nothing more

(t) *Beavis v. Rylands Glass and Engineering Co.*, 17 R. P. C. 93.

(u) 4 R. P. C. p. 462; 12 App. Ca.

711.

(v) *Young v. Fernie*, 4 Giff. 577.

(w) 5 R. P. C. 452.

than substitute in musical instruments Jacquard cards of a circular form, for Jacquard cards of the ordinary strip or band form.

In rejecting this argument, Fry, L.J., said: "It appears to me that, however plausible, it ought not to prevail. One has to consider what is involved in the substitution of a perforated disc for an ordinary strip or band, and it appears to me that invention is involved in that substitution as applied to a musical instrument. In the first place, something of thought, if not of invention, is required to see that the substitution of the one form of card for the other will carry with it any advantage. In the next place, it became necessary to invent and to prepare a disc of such a kind that the perforations shall produce the required results; notwithstanding the differential rates of motion of the peripheral and central portions of the disc, the plaintiff has so arranged the outer perforations as to produce the lower notes, and the inner to produce the higher notes. Again, in the previous instrument the motion had been horizontal, and now it had to be turned into a vertical motion, and a satisfactory mode of rotating the disc had to be applied, and all those things had to be done in such a manner that the final result should be a useful, simple, and handy instrument. In doing all that it appears to me that there plainly was invention required."

In the *American Braided Wire Company v. Thomson*, (x) the patentee's invention consisted, substantially, in the application of tubular sections of braided hard wire to the making of ladies' bustles. It was proved at the trial that the use in tubular sections of braided soft wire in the manufacture of analogous articles was old, and that it was known prior to the date of the patent that hard wire might be braided on an ordinary braiding machine by an adjustment of the mechanism. Analogous elastic substances had, of course, been used before in the making of bustles. The House of Lords by a majority held that although the patent was the adaptation of analogous new materials to a known result, yet there was sufficient ingenuity exhibited in that new application to indicate the exercise by the inventor of thought and experiment, and that therefore the patent was good.

Lord Herschell said: "It cannot be denied that both the prior patents to which I have referred afford some colour to the defendant's contention that the patentee here has done nothing more than apply a known substance in a manner and to a purpose analogous to that in and to which it had already been applied;

(x) 6 R. P. C. 525.

and that the patent, therefore, cannot be supported. If I thought that the patentee had claimed the mere use of tubular sections of braided wire as a bustle, however fastened or secured, I should arrive at the conclusion that the defendant's contention was well founded, but I do not thus construe the specification. I have already stated that, in my opinion, it is the combination alone for which protection is sought, and that the method of fastening the ends by clamping plates is an essential part of that which is claimed. Taking this view of the patent, I think that, even with the state of knowledge which existed at the time the patent was applied for, some invention was required to produce the bustle claimed to be protected by it. All the learned judges in the Court of Appeal, although they arrived at the same conclusion, stated that they had done so with hesitation, and expressed the opinion that but little invention was requisite, and that the case was near the border line. I entirely agree, and have not been without doubt as to the proper decision to be arrived at. . . . However, the mode in which the tube of braided wire is made available as a bustle by the use of clamps applied and fixed in the manner described, appears to me to be simple and efficient and not so obvious as to occur to every one contemplating the use of braided wire for the purposes of a bustle. The result is a complete article, light, effective, not likely to get out of order, and capable of being manufactured and therefore sold cheaply. And I am unable to say that to produce a new thing combining those qualities required no invention."

In the same case Lord Macnaghten said: "I think there is here just sufficient invention to support the patent."

In *Goddard v. Lyon*, (y) the patent was for an apparatus for purifying and disinfecting. It consisted of an outer and an inner chamber, into both of which steam was conducted. The inner chamber, in which the articles to be disinfected were put, was closed by a steam-tight door. The steam in the ante-chamber was intended to maintain the temperature in the inner chamber, and prevent condensation there. The arrangement of an outer and inner chamber, in both of which steam might be used, was not new; but no prior apparatus had enabled steam to be used in the inner chamber at a high pressure. High pressure greatly expedited the process of disinfecting. It was contended that this improvement involved no invention, and was not patentable. The House of Lords, however, affirming the Courts below, rejected

(y) 10 R. P. C. 121, 334; 11 R. P. C. 354.

this contention. Lord Halsbury, C., said: "It is quite true that the change is but small; but if it be the case that the change was made with a view to the use of steam, at a comparatively high pressure in the inner cylinder, and consequently rapid disinfection, and that the plaintiff for the first time put before the public a machine adapted for that purpose, although the difference between that machine and any machine in prior use might be slight, it appears to me to be none the less the subject-matter of a patent." (z)

Selection may amount to Invention.—The selection, by experiment and research, from a number of substances known to be suitable for a particular purpose of those substances which, if used in a particular way, will produce an article of commerce better than has been produced before, is invention sufficient to support a patent. (a)

"Invention," said Rigby, L.J., in the *Lancashire Explosives Company v. the Roburite Explosives Company*, "consists, in many cases, of putting together items of common knowledge which no one else has ever thought of combining. . . . The essence of this invention appears to be that the inventor has taken a great many things that were common knowledge, and tried which of those items of common knowledge would produce a useful and 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." (b)

The subject of invention in patent law has been dealt with here mainly by way of illustration, for, as Lord Esher, M.R., in *Elias v. Grovesend Tinplate Co.*, (c) said, the law has nowhere attempted to say what exactly invention is, being content as cases arise to say what cannot be invention. Of all questions in patent law it is probably the most difficult to decide. (d)

(z) 11 R. P. C. p. 360.

(a) Per Lord Herschell, *Lancashire Explosives Co. v. Roburite Co.* 12 R. P. C. 478.

(b) *Ibid.* p. 482.

(c) 7 R. P. C. 455, p. 463.

(d) Per Lindley, M.R., in *Dredge v. Parnell*, 15 R. P. C. 84, p. 88; 14 T. L. R. p. 211. On want of invention see also the following cases: *Deutsche Nähma-*

schinen Fabrik v. Pfaff, 7 R. P. C. 16; *Williams v. Nye*, 7 R. P. C. 63; *Newsom v. Mann*, 7 R. P. C. 307; *Longbottom v. Shaw*, 8 R. P. C. 333; *Embossed Metal Co. v. Saupe*, 8 R. P. C. 355; *Sudbury v. Lee*, 11 R. P. C. 58; *Wood v. Raphael*, 13 R. P. C. 730; 14 R. P. C. 496; *Riekmann v. Thierry*, 14 R. P. C. 105; *Dredge v. Parnell*, 15 R. P. C. 84; 16 R. P. C. 625.

CHAPTER X.

THE SPECIFICATIONS.

Specifications—Their Scope and Purpose.—Although every grant of letters patent is a mere exercise of the royal prerogative and no contractual relationship is thereby created between the Crown and the grantee, (a) judges have from time to time spoken of the Crown in its granting capacity as a contractor for the public, and of the patentee as the purchaser of a monopoly whom the law requires to honestly pay the full price for his privilege. (b) This language, loose and inaccurate as it is, (c) has been used because the Crown exacts as a condition of the grant a full disclosure by the patentee of the manner of performing his invention, so that the public at the conclusion of the patent term may be able to make as ample a use of the discovery as the inventor under cover of his monopoly has himself enjoyed. If such disclosure were not secured by the Crown on behalf of the public no patent for an invention could be supported, for no advantage would accrue to the public from the temporary restriction imposed upon them by the monopoly, and under the ancient rules of the common law the grant would be void. (d) This disclosure the patentee is required to make through the medium of his specification.

(a) *Feather v. The Queen*, 35 L. J. Q. B. 205; 6 B. & S. 257.

(b) Thus in *Cartwright v. Eamer* (cited 14 Ves. 131), Lord Eldon, then Chief Justice, said that a patent was to be considered as being in the nature of a bargain with the public, and the specification was therefore to be construed upon the same principle of good faith that regulates all other contracts. See, also, Lord Eldon's observation in *Harmar v. Plane* (14 Ves. 132) that he adhered to this dictum. Commenting on *Cartwright v. Eamer* in *Neilson v. Harford* (1 W. P. C.

341), Alderson, B., said: "Lord Eldon lays down the principle so long ago as 1800. He says patents are to be considered as bargains between the inventor and the public, to be judged of on the principles of good faith, by making a fair disclosure of the invention and to be construed as other bargains. That is the principle which must be taken to be the sound principle." See, also, *Walton v. Potter*, 1 W. P. C. 595; *Gibson v. Brand*, 1 W. P. C. 629.

(c) See ante, p. 12.

(d) See ante, p. 17.

“The object of the specification,” said Tindal, C.J., in *Walton v. Potter*, (e) “is that it is the price which the party who obtains the patent pays for it, and it would be a hard bargain on the part of the public if he were allowed to clothe his discovery and his description in characters so dark and so ambiguous that no one could make from it when the fourteen years have expired, and he should not have paid the price for which he enjoyed the exclusive privilege, but that he should have it in his hands still for as long a period as he chooses; and, therefore, it is always a proper answer where a patent is set up, to say that you have not so described it, that it may be understood.”

Again, in *Gibson v. Brand*, (f) the same learned judge said that the specification ought to be so clearly worded as to lead, without any doubt or difficulty, to the result which is the object of the patent, “because it is the price that the man who takes out the patent pays to the public for their being so long kept out of the enjoyment of the commodity or manufacture that is protected; the price he pays is, that he will lodge such an account of his own discovery and invention as will enable the public, at the expiration of fourteen years, to have as free and unreserved use of the invention as himself. Therefore, every man who is an honest man is bound to pay that price justly and fairly, and to word his specification in such a way as to be clear from all doubt.”

It is therefore apparent that it was as a means of safe-guarding the interests of the public and securing to them the full disclosure of the patentee's invention, that the expedient of requiring an inventor to specify the means of performing his discovery was first introduced.

Commenting on this in *Young v. Rosenthal*, (g) Grove, J., said: “The reason of that is this, that if he did not do so when the patent expired he might have some trade mystery which people would not be able actually to use in accordance with his invention (although they had a right to use it after his invention had expired), because they would not know how to make it. . . . Therefore he is bound to do these two things, namely, to tell the public what is the nature of his invention, and to tell them how the invention is to be made in practice. Take, for instance, a chemical invention. A man might make a chemical discovery, and he might claim a patent for it, and call it by his own name, ‘Thomas's This’ or ‘Thomas's That;’ and when the patent came

(e) 1 W. P. C. 595.

(f) 1 W. P. C. 629.

(g) 1 R. P. C. 29.

to an end the public might not know the least in the world how to make it, and he would still continue by that means to have a monopoly which he had no right to continue, and which was granted to him for fourteen years only, unless it was prolonged, and then, when the fourteen years came to an end, the public might not know how his chemical invention is made. . . . he might get not only fourteen years but twice or three times fourteen years' monopoly by keeping secret his manufacture. Therefore, in the interest of the public, the law says the patentee must fairly and properly describe the nature of his invention in what is now publicly called his claim, and also the means or mode by which it can be performed." (*h*)

Origin of the Specification.—The importance of securing in a written document that full disclosure of an invention which the modern specification provides was not apparent at the date of the Statute of Monopolies. At that time new inventions as the words are now understood were practically unknown. A "new manufacture" to the draftsmen of the Act of James I. meant a new trade; and as apprenticeship was then universal, it was assumed that every patentee would work his invention with the assistance of apprentices, who, when the patent had expired, would be free to perform the invention for themselves.

The idea of conferring the invention on the public at large, at the conclusion of the patent term, would never have occurred to the mind of a Stuart lawyer, whose views of trade were moulded upon the assumption that none deserved to be free of a mystery but such as had served an apprenticeship in it. Hence in his eyes the patentee's obligations would be sufficiently discharged if the invention resulted in the establishment in the country of a new industry, even although restricted, as all trades then were, to the hands of such persons as had been apprenticed thereto.

Hence, for long, patentees were not required to specify the details of their inventions, and a vague description of the nature of an invention inserted in the body of the grant was accepted as sufficient by the legal advisers of the Crown.

The specification as a separate instrument first appears in the reign of Queen Anne, (*i*) when one of the law officers of the Crown inserted in the terms of the royal letters patent a new proviso,

(*h*) See, also, *Philpott v. Hanbury*, 2 B. P. C. 83.

(*i*) See Lord Blackburn in *Bailey v. Robertson*, 3 App. Ca. 1074. See, also, Fry, J., in *United Telephone Co. v. Harrison*,

51 L. J. Ch. p. 709; 21 O. D. p. 743. The first patent containing this condition appears to have been *Nasmyth's*, dated 1711. See Webster's *Letters Patent*, p. 6, n.

under which the grantee was bound, on pain of avoiding the grant, to describe and ascertain in an instrument in writing, and within a specified time after the sealing of the patent, the nature of his invention and the manner of performing it. Thus, letters patent became conditional grants, dependent for their validity upon the performance of the condition imposed by this proviso. The former general description was still retained in the body of the grant and operated as the title of the invention; but from this time it was to the document filed after the patent was granted that the public had to look for information as to the mode of carrying the patentee's discovery into practice. (*j*)

In the specification thus introduced the patentee was under the necessity of complying with two conditions; first, the specification must relate to the same invention as that of which the nature was described by the title embodied in the grant; and, secondly, it was necessary that it should fully describe the manner of making that invention. If the first of these conditions was not fulfilled the patent was bad, for in that case the Crown had granted a monopoly of one invention and the patentee had described another; if the second, the patent was equally bad, for the eventuality had then arisen under which, by the terms of one of its provisos, the patent became void.

Practice under the Patent Law Amendment Act, 1852.—For many years one specification was deemed sufficient, and patents were granted on the vague statements of the titles of inventions, subject to the patentee subsequently filing his specification. As inventions increased, however, in number and importance, the inconvenience of this system became more and more apparent. Patents were applied for under titles of the most general character, with the object of embracing "the widest circle of the particular class of invention intended to be patented." (*k*) In the public interest it became necessary to tie the patentee down to a more detailed representation of the ambit of his invention than the vague title afforded, and to obviate the inconvenience, an amendment of the law was introduced by the Patent Law Amendment Act, 1852. (*l*) Under the provisions of that Act, the office of the former title was assigned to a preliminary specification, called the provisional specification, in which the intending patentee was required to describe the nature of his invention; while to the former specification (now called the complete specification) was still

(*j*) Per Lord Chelmsford in *Penn v. Bibby*, L. R. 2 Ch. 132.

(*k*) *Ibid.*

(*l*) 15 & 16 Vict. c. 83, s. 6.

allotted the function of informing the public how the invention could be put in practice. The provisional specification, thus for the first time introduced, was delivered by the inventor with his application for a patent, and the letters patent sealed with the proviso as formerly, that the grantee should, within a specified period, (*m*) file another specification, particularly describing and ascertaining the nature of the invention, and the manner in which it was to be performed.

Present Practice.—The Patent Law Amendment Act, 1852, is now repealed by the Patents Act, 1883, (*n*) under which, while the names and functions of the two specifications have been retained, a modification has been introduced, requiring both specifications to be filed before the grant is sealed. Hence, letters patent are now granted, not upon a condition that the inventor will fully describe the manner of performing his invention within a limited time, but upon the faith of a representation by the applicant that this has been already done. (*o*) The former condition subsequent has thus become a condition precedent; but, except as regards the date of its fulfilment, that condition remains the same.

The Title.

Considerations affecting the Choice of a Title.—Every specification ought to commence with the title of the invention to which it relates. (*p*) Such title should indicate the subject-matter of the invention. (*q*) If it does not do so, the Comptroller may require the applicant to amend it, or, in the absence of such amendment, refuse the application altogether. (*r*) From the decision of the Comptroller an appeal lies to the Law Officer, whose determination is final. (*s*)

Before the introduction of the provisional specification, patents were frequently upset on the ground of a disconformity between the title and the specification. Under the existing practice, however, any objection to the title will be taken by the officials of the Patent Office. So far as the public are concerned, no exception can now be taken to the title of an invention, except as constituting

(*m*) Six months, under this Act: 15 & 16 Vict. c. 83, s. 8.

(*n*) 46 & 47 Vict. c. 57.

(*o*) The form of letters patent now in use recites only that the inventor has by his complete specification particularly described the nature of his invention (see ante, p. 16). By s. 5 (4) of the Patents

Act, 1883, a complete specification must, however, also particularly describe in what manner the invention is to be performed.

(*p*) Patents Act, 1883, s. 5 (5).

(*q*) Ibid. s. 6.

(*r*) Ibid. s. 7 (1).

(*s*) Ibid. s. 7 (2).

part of the provisional specification, and perhaps indicating a more restricted invention than that claimed in the complete specification. The early cases on the titles of inventions illustrate rather the principles upon which the Courts will act in considering the conformity of the two specifications required under the present law, than the sufficiency of the title independently of the provisional specification.

Two general rules may, however, be laid down to guide inventors in the selection of the titles of their inventions. First, the intending patentee should be careful to frame his title in language sufficiently wide to clearly cover the whole of his invention; for the title limits the ambit of the invention, which cannot be enlarged by subsequently inserting in the complete specification a wider claim. (t) Secondly, an inventor in choosing a title should remember that the mere generality of the words employed, provided they are not inaccurately used, is no ground of objection to a title. (u) It is always open to an inventor to subsequently limit his claim to less than the title originally covered, either by a disclaiming clause in the complete specification, or by an amendment of the original application. The harm done by a too general title is therefore not irreparable; whereas the vice of a title expressed in language too narrow to cover the whole invention is incurable, as there is no power of amendment except by way of excision.

In *Dart's* (v) case the original title read as follows: "Improved means of regulating the action of dynamo-electric machines and motors." On delivering their complete specification, the applicants, desiring, as the result of experiments, to narrow the scope of their invention, omitted from the title the words, "and motors." The case having come before the Law Officer, on appeal from the Comptroller, Sir R. E. Webster, A.G., referring to the Patents Act, 1883, said: "The question of the amendment of title is not directly dealt with by any section of the Act. Section 5 (5) provides that a specification, whether provisional or complete, must commence with the title. Under ordinary circumstances this title is intended to be in accordance with the title quoted in the

(t) *Croll v. Edge*, per Maule, J., 19 L. J. C. P. 261; 9 C. B. 479.

(u) The leading case in the early reports on this point is *Cook v. Pearce*; see the judgment of Tindal, C.J., 8 Q. B. 1044; 12 L. J. Q. B. 187; 13 L. J. Q. B. 189. For illustrations of titles formerly

held too vague, see the following cases: *Cochrane v. Smethurst*, D. P. C. 354; *Campion v. Benyon*, 6 B. Moo. 71; *Bloxam v. Elsee*, 6 B. & C. 169, 178; *Bainbridge v. Wigley*, 1 Carp. 270.

(v) Giff. 308.

application for letters patent. Under Section 7 (1), if the title does not sufficiently indicate the subject-matter of the invention, the Comptroller-General may require that the application be amended. In my judgment, this section empowers the Comptroller to order an amendment of the title in the application if, in his opinion, the title does not sufficiently indicate the invention described in the provisional specification. . . . If the applicant merely desire to omit part of the invention described in the original title and provisional specification, I do not see that any amendment of the title and provisional specification is, of necessity, required, as I think that a proper disclaiming clause might be inserted in the complete, indicating that part only of the invention originally covered by the title of the provisional was intended to be claimed; but should the applicant think that some risk to the validity of his patent might be occasioned by such a course being adopted, it is open to him to lodge a complete, omitting the part desired to be left out, and open to the Patent Office, under Sections 7 and 9, to permit the original application and provisional to be amended by striking out the part which it is no longer desired to retain. It must, however, be distinctly understood that such an amendment in the title and provisional ought, in my opinion, to be confined to excision only, and not to amendment or other explanation, and the excision must be such as does not extend the scope of the title." (*w*)

The Provisional Specification.

Its Function and Requirements.—The function of the provisional specification is to ascertain the identity, not the entirety of the invention. (*x*) The necessity which the law has imposed upon every patentee of filing such a document is a legislative recognition of the custom which called upon every inventor who applied for a patent to give some notion of what his invention was. (*y*) "The office of the provisional specification," said Byles, J., in what has been called the leading dictum on this part of the law, (*z*) "is only to describe generally and fairly the nature of the invention, and not to enter into all the minute details as to the manner in which the invention is to be carried out." (*a*)

(*w*) See, also, *Brown's Patent*, Griff. P. C. 155.
A. P. C. 1.

(*x*) *Newall v. Elliott*, 4 C. B. (N.S.), 293, per Pollock, C.B.

(*y*) *Ibid.*

(*z*) Per Kay, J., *Lucas v. Miller*, 2 R.

(*a*) *Newall v. Elliott*, 4 C. B. (N.S.), 293.
See, also, *United Telephone v. Harrison*, 21 C. D. p. 744; 51 L. J. Ch. p. 709; Patents Act, 1883, s. 5 (3). For examples of specifications, see Appendix IV., post.

The circumstance that the law allows a longer period to the inventor for filing his complete specification, shews that the provisional specification is not intended to include the details of the invention; these the inventor is assumed to be still elaborating. One of the objects of the provisional specification is to afford him protection within the ambit of his discovery, while he works out these details. At the time when the provisional specification is drawn he is presumed not to know them. (b)

The provisional specification, then, may be said to bear to the complete specification the relation which the title formerly bore to the old specification. It gives notice of the nature of the invention for which protection is sought, but not of the means of putting that invention into use. It is sufficient if it contains a fair general description; it is not intended to contain minute details.

“The relation which the provisional specification bears to the complete specification,” said Lord Chelmsford, C., in *Penn v. Bibby*, (c) “is much the same as that which before the Patent Law Amendment Act, 1852, the title bore to the specification; and the observations of Tindal, C.J., in *Cook v. Pearce* (d) are as applicable to the provisional specification now as they were to the title formerly. That learned judge says, ‘The vagueness’ (he had previously spoken of the vagueness and generality) ‘of the title appears to us to be an objection that may well be taken on the part of the Crown before it grants the patent, but to afford no ground for avoiding the patent after it has been granted. If such title did not agree with the specification when enrolled, or if there had been any fraud practised on the Crown in obtaining the patent with such title, the patent in those cases might undoubtedly be held void.’ These remarks as applied to the title of a patent have a stronger application to the case of a provisional specification under the Patent Law Amendment Act, 1852, because the Law Officer, if he thinks the patent too large, can order it to be amended. And if no objection is made by him, the generality of the specification, to repeat the words of Tindal, C.J., affords no grounds for avoiding the patent after it is granted.”

“A provisional specification,” said Jessel, M.R., in *Stoner v.*

(b) See Tenterden, C.J., in *Crossley v. Beverley*, 1 W. P. C. 117; 3 O. & P. 513; 9 B. & C. 63; *Gadd v. Mayor of Manchester*, 9 R. P. C. 526 (per Lindley, L.J.).

(c) L. R. 2 Ch. 133; 36 L. J. Ch. 459.
(d) 8 Q. B. 1044, p. 1064; 12 L. J. Q. B. 187; 13 L. J. Q. B. 189.

Todd, (e) “was never intended to be more than a mode of protecting an inventor until the time for filing the final specification. It was not intended to contain a complete description of the thing, so as to enable any workman of ordinary skill to make it, but only to disclose the invention, fairly no doubt, but in its rough state, until the inventor could perfect its details.” (f)

“A provisional specification,” said Lindley, L.J., in *Woodward v. Sansum*, (g) “was never intended to contain a complete and exhaustive description of the invention; it was intended to be sufficiently specific to disclose the nature of the invention, so as to protect the inventor until the time for filing the complete or final specification, but permitting him in the meantime to perfect any details, to modify, supplement, and develop his invention, always keeping within what I may call the ambit of his invention, as disclosed in his provisional specification.”

The provisional specification being the intimation of the patentee to the Crown of the discovery for which he asks letters patent, it does not lie with the public to take exception to the terms of that document. The sufficiency thereof is a matter solely concerning the Crown. And once letters patent have been sealed, no objection to their validity can be taken by the public on any alleged inadequacy of the provisional specification. (h)

Practice under the Patents Act, 1883.—The Patents Act, 1883, which governs the present practice, provides that the provisional specification shall commence with the title of the invention. (i) It must describe the nature of the invention and be accompanied by drawings if required. (j)

As formerly, it is not required to contain details; if it fairly describes the invention in the rough, that is sufficient. (k) It need not describe the advantages of the invention, and if it does, the patentee is not limited in his complete specification to such developments of his invention as possess all the advantages so described. (l)

The provisional specification must be left at the Patent Office with the application for letters patent. There it is referred by the Comptroller to an examiner to report whether the title sufficiently indicates the subject-matter, whether the description it contains is

(e) L. R. 4 C. D. 58; 46 L. J. Ch. 32.

(f) Cf. Lord Blackburn in *Bailey v. Robertson*, 3 App. Ca. 1074.

(g) 4 R. P. C. 178.

(h) *Cooke v. Pearce*, 8 Q. B. p. 1064; *Penn v. Bibby*, L. R. 2 Ch. 133; *Nickels v.*

Haslam, 7 M. & G. p. 385.

(i) Patents Act, 1883, s. 5 (5).

(j) *Ibid.* s. 5 (3).

(k) *Pneumatic Tyre Co. v. East London Rubber Co.*, 14 R. P. C. 77, 573; 75 L. T. 488.

(l) *Ibid.* 14 R. P. C. p. 99.

fair, and whether the applicant has complied with the prescribed forms. (m) If the examiner reports unfavourably, the Comptroller may require an amendment of the specification and vary the date, so as to make the application run from the time when such amendment is complied with. (n) From the decision of the Comptroller an appeal lies to the Law Officer, whose determination is final. (o)

Under the Patent Law Amendment Act, 1852, all provisional specifications were published by the Crown authorities. (p) An applicant, therefore, who decided to abandon his application after obtaining provisional protection under that Act, gave his invention to the public in so far as it was disclosed by his provisional specification. Under the present Acts a different practice prevails. A provisional specification is now only published after the complete specification has also been filed, and not at all if the application is abandoned. (q) Hence, if an applicant is unable to complete the details of his invention within the time allowed for preparing the complete specification, he may allow his first application to lapse, without precluding himself from obtaining a patent for his invention on a subsequent application, except in so far as he incurs the risk of anticipation by some rival inventor.

The Complete Specification.

Statutory Requirements of the Complete Specification.—The provisional specification being the inventor's representation to the Crown as to the scope of the invention for which he seeks protection, the complete specification is his unreserved gift to the public (to take effect, however, only at a determinate future date) of that discovery, of which meanwhile he claims for himself the exclusive enjoyment. It is therefore at once apparent that the complete specification must contain many details which are not required to be inserted in the provisional specification. The latter may be a bare outline sketch; the former must be a completed picture.

The complete specification must set out the invention in detail. It must particularly describe and ascertain the nature of the invention and in what manner it is to be performed. (r) Ascertaining means making reasonably certain. (s) It must commence, like the provisional specification, with the title, and be accompanied

(m) Patents Act, 1883, s. 6.

(n) Patents Act, 1883, s. 2.

(o) *Ibid.* s. 2 (3).

(p) 15 & 16 Vict. c. 83, s. 29.

(q) Patents Act, 1885, s. 4.

(r) Patents Act, 1883, s. 5 (4).

(s) Per Grove, J., *Philpott v. Hanbury*, 2 R. P. C. 33.

by drawings to illustrate it if required. (t) Where drawings have been left with the provisional specification it may, however, refer to such instead of repeating them. (u) The Acts further require that the complete specification shall end with a distinct statement of the invention claimed. (v) As that statement is notice to the public of what the patentee claims to monopolise, it ought to be made as clear and explicit as is reasonably possible, having regard to the subject-matter of the invention. It is, therefore, undesirable that it should be embarrassed by constant references back to the body of the specification. (w)

At the same time, the statutory requirement that the complete specification shall end with a distinct statement of the invention claimed is one of form only, and a failure to comply with this condition, once the Comptroller has accepted the specification, is no ground for subsequently holding the patent bad.

Referring to this in *Siddell v. Vickers*, (x) Lord Herschell said: "The Act does not provide that if this requirement is not complied with the patent shall be void, and I think it impossible to imply any such condition. There is no more warrant for doing so in this case than in the case of non-compliance with any other of the provisions of the section. The provision which immediately precedes that in question requires that a specification should commence with the title. It could hardly be gravely contended that if the Comptroller accepted a specification where the title did not occupy the first place the patent granted ought on that account to be held void." (y)

The complete specification ought to be in the form prescribed by the Patents Act, 1883, and signed by the applicant. But the statutory form is not intended to cover every possible application, and may be varied to meet any new case. (z) Where several applicants join in applying for a patent, it will be sufficient if the complete specification is signed by one of them. (a)

The complete specification must be left by the applicant at the Patent Office within nine months from the date of application. Otherwise the application is treated as abandoned. (b) But leave may be given by the Comptroller to extend the time by any period not exceeding one month. (c)

(t) Patents Act, 1883, s. 5.

(u) Patents Act, 1886, s. 2.

(v) Patents Act, 1883, s. 5.

(w) Per Fry, J. See *Fairfax v. Lyons*,
8 R. P. C. 407.

(x) 7 R. P. C. 307; 15 App. Ca. 496,
p. 500.

(y) See, also, *Kelly v. Heathman*, 7
R. P. C. 348.

(z) *Grenfell & McEvoy's Application*, 7
R. P. C. 151.

(a) *Ibid.*

(b) Patents Act, 1883, s. 8.

(c) Patents Act, 1885, s. 3.

The complete specification, like the provisional, must pass the ordeal of examination by an official examiner, to whom it is referred by the Comptroller. *(d)* It is the duty of this examiner to see that it is prepared in the prescribed form, and that it describes substantially the same invention as that which is outlined in the provisional specification. *(e)* If the examiner reports unfavourably the Comptroller may refuse to accept the specification until it has been amended as he may require. *(f)* From such refusal an appeal lies to the Law Officer, with whom the ultimate determination of the matter rests. *(g)*

If the complete specification is not accepted within twelve months from the date of the application for letters patent, the application—unless an appeal is pending in respect of it to the Law Officer—becomes void. *(h)* But the time may be extended by the Comptroller for any period not exceeding three months. *(i)*

The reports of examiners are not published, and are privileged from production or inspection in all legal proceedings, unless the Court or officer having power to order discovery of them certifies that their production or inspection is desirable in the interests of justice and ought to be allowed. *(j)*

Having indicated the statutory requirements of a complete specification, it is now necessary to consider more in detail the light which the judicial decisions have thrown upon the object and scope of that instrument.

Good Faith towards the Crown.

Disconformity between the Specifications will Avoid a Patent.—In preparing his complete specification an inventor must observe strict good faith towards the Crown as the protector of the public interest. Thus, he must confine himself rigorously to the invention outlined in his provisional specification. If, having applied for letters patent for one invention, he proceeds by his complete specification to describe a different invention, or one of larger ambit, his grant will be void. In a word, there must be no disconformity between the two specifications.

The objection of disconformity is one which may be raised at any time to defeat letters patent, for the decision of the Patent

(d) Patents Act, 1883, s. 9 (1).

(e) Ibid.

(f) Ibid. sub-s. 2.

(g) Ibid. sub-ss. 2 & 3.

(h) Ibid. sub-s. 4.

(i) Patents Act, 1885, s. 3.

(j) Patents Act, 1883, s. 9 (5); Patents Act, 1888, s. 3.

Office to accept a complete specification is no estoppel upon any member of the public who may desire subsequently to question the validity of the grant, on grounds of disconformity.

On this point Lord Halsbury, C., in *Siddell v. Vickers*, (k) said: "It is suggested that the new machinery of the Comptroller and the examiner has superseded the power of raising any objection to the conformity of the provisional and complete specification. I am unable to take that view. I think it is an essential condition of a good patent that the invention described in the provisional should be the same as that in the complete specification, and I think the third sub-section of Section 26 preserves this as a ground upon which an action for the infringement of a patent right might be defended, and a ground upon which a patent might be revoked."

'So likewise in *Nuttall v. Hargreaves*, (l) Lindley, L.J., discussing the question whether the Patents Act, 1883, had deprived a defendant in an infringement action of the defence of disconformity between the specifications, said: "In order to answer that question we must look at the further sections of the Act of Parliament, and the important one, passing by Section 14, is Section 26, Clause 3. Section 26 relates to revocation, and it says: '(1) The proceeding by *scire facias* to repeal a patent is hereby abolished; (2) Revocation of a patent may be obtained on petition to the Court; (3) Every ground on which a patent might at the commencement of this Act be repealed by *scire facias*, shall be available by way of defence to an action of infringement, and shall also be a ground of revocation.' In order to give effect to that section you have to consider what the effect would have been of a patentee before the Act not stating in his provisional specification the real nature of his invention, so as to identify it with the invention which he described in his complete specification. The answer to that has been settled by authority, and I think the last case of any importance was *Bailey v. Robertson*. (m) If the invention described in the two specifications is not the same the patent is bad. . . . In the face, therefore, of the twenty-sixth section, it appears to me that if in point of true construction these two specifications are not for the same invention this patent cannot be upheld."

At the same time it is manifest that the complete specification must contain details which do not appear in the provisional, and

(k) 7 R. P. C. p. 303; 15 App. Ca. p. 499. 61 L. J. Ch. 94.

(m) 3 App. Ca. 1055.

(l) 8 R. P. C. 453; [1892] 1 Ch. 23;

be the expression of an ampler knowledge than the patentee possessed at the date of the earlier document; for the whole object of provisional protection is to give the applicant time in which to develop and perfect the working of his invention, so that when he finally describes it he may give the fullest possible measure of useful information regarding it to the public. The law, therefore, contemplates the invention as a growing thing in the mind of the inventor; and questions of great difficulty must from time to time arise as to whether all the matters included and claimed in the complete specification legitimately flow from, and are part of, the original discovery, or are, as to some of them, matters of independent invention. In the desire to anticipate possible competitors, an intending patentee will sometimes apply for provisional protection while he has still but a crude idea of the discovery he believes himself to have made. In such case the working out of his invention may disclose results he little anticipated, and cause him to include in his complete specification matters which are really independent inventions. The temptation to thus transgress the limits which the law imposes is not lessened by the circumstance that it is in fact often most difficult to say where details cease to be developments of the original discovery and become independent inventions.

The general rule is that the patentee must not extend in his complete specification the area of the monopoly which he has indicated as the object of his application in the provisional specification; all new matters inserted in the complete specification must therefore be detail, legitimately flowing from the elaboration of the original invention described in the earlier specification.

Illustrations of this rule may be found in some of the early cases, if the dictum of Lord Chelmsford in *Penn v. Bibby* ⁽ⁿ⁾ be borne in mind, that the relation of the old title to the old specification is the same as that now existing between the provisional and complete specifications.

Thus, in *Cook v. Pearce*, ^(o) Tindal, C.J., said: "Any evidence of a design on the part of an inventor to choose a vague and general title, in order that he might avail himself at the time of the enrolling of the specification of an invention not discovered by him at the time of the taking out of the patent, or in order to prevent other subjects of the Queen from availing themselves of a discovery made by them upon the ground of its falling within the

⁽ⁿ⁾ L. R. 2 Ch. 133; 36 L. J. Ch. 459.

^(o) 8 C. B. p. 1064; 12 L. J. Q. B. 187; 13 L. J. Q. B. 189.

range of the general terms of the title, although such invention was different from that for which the patent was really and in truth taken out, might afford such proof of fraud upon the Crown and injury to the subject as that the vagueness and generality of the title in such cases might avoid the patent."

In *Croll v. Edge*, (*p*) the subject-matter of the letters patent, as originally described by the applicants in their title, was "Improvements in the manufacture of gas for the purpose of illumination, and in the apparatus used when transmitting and measuring gas." But in the specification subsequently enrolled, the patentees inserted two further words, so that it read, "For improvements in the manufacture of gas for the purpose of illumination, and in the apparatus used *therein, and* when transmitting and measuring gas." In consequence of this the Court of Common Pleas held the specification insufficient. Maule, J., in delivering the judgment of the Court, said: "The insertion is slight as to the number of words, but it adds most materially to the meaning of the sentence, and extends substantially the grant of the Crown; because the title, as suggested in the specification, represents the patent as being a patent for different kinds of apparatus used for two distinct things, viz., the making of gas, and the transmitting and measuring it. . . . Now, the patent granted was a patent 'for certain improvements in the manufacture of gas for the purpose of illumination, and in the apparatus used,'—not 'when manufacturing gas,' but 'when transmitting and measuring gas.' The title did not profess to comprehend improvements in any apparatus used in making gas. The patentees, in representing to the Crown the nature of the invention which they had discovered, did not give the Crown notice that they claimed the exclusive use of any apparatus for making gas. The title of the patent as described in the specification is one which comprehends as well improvements in apparatus for making gas as improvements in apparatus used in its transmission and metage. And, when the body of the specification is looked at, one main part of the patentees' claim consists of what may be, and probably is, a new mode of manufacturing clay retorts—an apparatus used in the manufacture, and not in the transmitting and measuring of gas. Any person reading the specification for the purpose of ascertaining what the patentees claim as their exclusive right, would see without doubt that a material branch of their claim, and of the patent, the specification of which they were professing to enroll, was an improvement in apparatus

(*p*) 9 C. B. 476; 19 L. J. C. P. 261.

used in the manufacture of gas. Now, no patent at all has been granted to them for that; and it appears to us to be difficult to suppose that the inrolling a specification in the terms here used can have been intended as otherwise than an attempt on the part of the grantees to remedy an oversight, and so alter and enlarge the patent. It seems to us that they have specified for a more extensive and a different patent from that which was granted to them. We therefore think the specification insufficient."

Among the later authorities on this point perhaps the most important is *Bailey v. Robertson*, (q) a case decided by the House of Lords on appeal from the Court of Session in Scotland. In that case the provisional specification stated that the object of the invention was the preservation of animal substances in a fresh state for a long time, so that when eaten they should not be distinguishable from animal flesh recently killed, and for the preservation of hides. This result the patentee said he achieved by coating animal substances with a mixed solution of gelatine and bisulphite of lime. In the complete specification, filed six months later, the patentee specified and claimed four different solutions adapted for the preservation of animal substances in various forms. The first of these, solution No. 1, was a solution of bisulphite of lime alone, unmixed with gelatine. Bisulphite of lime had been used for this purpose by a prior patentee. In an action for infringement against defenders, who had used bisulphite of lime alone, their lordships held that the complete specification, if large enough to cover the employment of bisulphite of lime for the preservation of animal substances, as practised by the defenders, would claim an invention larger than, and different from, that disclosed in the provisional specification, and would be open to the objection of want of novelty, and of want of a sufficient description of the manner in which the invention was to be performed; that therefore the patent was not valid and effectual to secure to the patentees the invention, or supposed invention, used by the defenders, though it might be valid to secure to them the invention described in the provisional specification.

"What is the invention," said Lord Cairns, "which is described in the provisional specification? That is the foundation of the whole of the claim of the appellants. Whatever be the invention which is there described, that is the invention which the appellants inform the Crown they have discovered, and in respect

(q) 3 App. Ca. 1055.

of which they ask for the protection of a patent, that is the invention in respect of which the patent is given to them ; and whatever be that invention, it became their duty to specify it, and not another or a different invention, in the complete specification. . . . If the complete specification claims the solution No. 1, and the use of it separately as an invention pure and simple, then indeed the appellants may be able to shew that the respondents have infringed that use. But, on the other hand, they can only do so by claiming an invention through the medium of the complete specification which is not mentioned in the provisional specification, and as to the mode of exercising or applying which they cannot in that specification point out any claim or any information given to the public."

In the *United Telephone Company v. Harrison*, (r) the invention was for the transmission of sounds by electrical agency to a distance. The complete specification exceeded the provisional, and the patent was held void. The complete specification contained the following claim : " I am enabled to record the sounds produced by the human voice, or otherwise, by causing the movements of the diaphragm to be registered on paper or soft sheet metal, and then the paper may be used as an instrument to reproduce the sound upon a delicate diaphragm, by giving to the same a vibration similar to that originally given by the voice." The Court construed this as a claim to the instrument. Fry, J., said : (s) " It is impossible for me to read that, and not to believe it to be a claim to the instrument, whether used in combination with an electric current or not, its capacity to produce sound without any relation to the electric current having been pointed out and dwelt upon. The mode of indenting was a novelty ; the mode of reproducing that sound was a novelty ; and the claim appears to me to cover the phonograph in both its applications—its application to reproduce human sound directly and immediately at the spot where the voice had been spoken to it, and its application also as the transmitter of the same voice to a distance. Has that remarkable discovery so made by *Edison* been in any manner described in the provisional specification ? The Statute, as we all know, requires that the provisional specification shall describe the nature of the invention ; and before I proceed to consider the provisional specification in this case, I think it desirable to refer to some of the authorities which will explain the principle upon which I ought to proceed." After citing

(r) L. R. 21 C. D. 720; 51 L. J. Ch.
709.

(s) L. R. 21 C. D. p. 743.

Bailey v. Robertson (t) and *Newall v. Elliott*, (u) the learned judge continued: "Now I turn, with the light thrown by those cases as to the proper mode of construction, to the provisional specification in this case, and find that the title, which is to be read as part of the provisional specification, is, controlling by sound the transmission of electric currents, and the reproduction of corresponding sounds at a distance. And the inventor proceeds in this manner; he says, 'The vibrations of the atmosphere which result from the human voice, or from any musical instrument or otherwise, are made to act in increasing or lessening the electric force upon a line by opening or closing the circuit.'" After referring to the details of the invention, his lordship continued: "It is plain that that description refers entirely to the transmission of sound or the controlling of sound by means of electric currents or electricity in some form or other, and cannot, in my judgment, be taken to apply to an instrument which is capable of being worked in a very remarkable manner without the application of electricity in any shape or form. . . . Now, no doubt, some of those words do explain, or might be held to refer to an instrument like the phonograph; but when I ask myself whether they in any manner describe the nature of the invention, I am bound to say that they do not. . . . Supposing an inventor had, during the six months which preceded the complete specification, invented the phonograph, not as applied to the electric telegraph, but operating by itself, can it be said that that invention would have been protected by the description contained in this provisional specification of that instrument? I agree that the provisional specification need not describe the manner in which the invention is to be carried into effect. I agree that it need not describe the nature of the invention otherwise than roughly; but it ought to do so fairly and honestly; and if *Mr. Edison* was, at the time at which these letters patent were granted, in possession of that very remarkable mechanical invention by which speech might be reproduced, not necessarily at a distance, but in the same room as that in which it was uttered, I do not think that the provisional specification was an honest statement of the nature of the discovery. On that ground I come to the conclusion that *Mr. Edison's* patent cannot be upheld."

In *Watling v. Stevens*, (v) Lord Esher, M.R., discussing an alleged disconformity between the provisional and complete specifications of the plaintiff's patent, said: "The main question which

(t) 3 App. Ca. 1055.

(u) 10 Jur. 955; 4 C. B. (N. S.), 293;

see post, p. 178.

(v) 3 R. P. C. 151.

the parties came here to argue is that it is said that the complete specification goes beyond, and too far beyond, the provisional specification, and that therefore the whole patent is bad. I think that the law with regard to that is this: that if the complete specification sets out and claims an invention independent of that which is in the provisional specification, besides also describing that invention which is in the provisional specification, then the complete specification is bad. It would be equally bad if the invention described in the complete specification were a wholly different invention from that described in the provisional specification, because, as has been said, the patent is not given then, for the invention which is described in the provisional specification. Therefore (I must try and say it again), if there were only one invention described in the provisional application, and only one in the complete specification, but those two inventions were wholly and substantially different, the patent would be bad. So, if an invention is described in the provisional specification, which invention is also described in the complete specification, but in the complete specification another and distinct invention is described and claimed, then it is bad, because, with regard to the second invention, there is no provisional specification to cover it."

In *Nuttall v. Hargreaves*, (*w*) the Court of Appeal were of opinion that at the date of the provisional specification no useful invention had been made by the patentee, and that the invention claimed by his complete specification was a subsequent and independent discovery. They accordingly held the patent void for disconformity. (*x*)

The Complete Specification may include Improvements of the Invention discovered during the Provisional Protection.—While thus insisting formerly on conformity between the title and the specification, and now between the provisional and complete specifications, the Courts have always recognized the right of an inventor to the fullest latitude within the ambit of his discovery. The invention is assumed to be a growing thing in the mind of the applicant, and the law encourages him to prosecute its development during the period allowed him for preparing his complete specification. Hence, it is no disconformity to include in that document improvements and modifications which have occurred to the inventor subsequent to the date of his application for letters

(*w*) [1892] 1 Ch. 23; 8 R. P. C. 453.

(*x*) Of this case Lindley, L.J., in *Gadd v. The Mayor of Manchester*, said that it

went further than any other. See 9 R. P. C. p. 527.

patent. On the contrary, it is the duty of the inventor to set out such improvements in his complete specification, if he has discovered them; otherwise, the public would not have, at the end of his monopoly term, the full benefit of his invention.

In *Jones v. Heaton*, (y) Tindal, C.J., said that a patentee was bound to give in his specification the most improved state of his invention up to the date of enrolling the specification.

In *Crossley v. Beverley*, (z) it was objected that the description of the invention in the specification was an attempt to extend the patentee's monopoly. In disallowing the objection, Lord Tenterden, C.J., said: "The objection really would come to this. If at the time a person applies for the patent he has in his mind an invention capable of producing the effect which he represents it to be capable of producing, and has brought that invention to a great degree of perfection, and within the time allowed by the patent for exhibiting the specification, and before the arrival of that time, he perfects his invention, and renders it more complete by the introduction of a different species of machinery, by the application of that to different mechanical parts of the machine; if so, whether that will make his patent void. No case has ever decided that, and I think it would be extremely dangerous to lay down any such doctrine. I do not see, myself, why time is allowed to prepare the specification, except upon the idea that the person, at the time he took out his patent, has not brought his machine, or whatever he has invented, to that degree of perfection which it may be supposed he is capable of bringing it to, and therefore he is allowed further time to do it."

"The specification, with new improvements," said Bailey, J., in the same case, "would still be the thing for which the patent was obtained, and I think it is most beneficial to the public to say that it is the duty of the inventor, if between the period of taking out the patent and enrolling the specification he makes discoveries which will enable it better to effectuate the thing for which the patent was obtained, not only that he is at liberty to introduce them into his patent, but that it is his bounden duty to do so, and that it is not sufficient for him to communicate to the public the knowledge which he had at the time he obtained the patent, but he ought to communicate to the public the knowledge he has obtained before the specification; and therefore I am of opinion, in this

(y) 1 W. P. C. 404, n.

(z) 1 W. P. C. 116; 3 C. & P. 513;
9 B. & C. 63. Of this case, in *Jupe v.*

Pratt, Alderson, B., said: "There never was a more instructive case than that":
1 W. P. C. p. 146.

case, the objection which has been taken to this patent is not to be supported."

"The filing of the provisional specification, by the express provisions of the Statute," said Lord Chelmsford, referring to the Patent Law Amendment Act, 1852, (a) "protects the invention for six months, and gives the patentee during this term the like powers, rights, and privileges, as might have been conferred upon him by letters patent. The object of the protection evidently is to enable the patentee to perfect his invention by experiments which, although open and known, will not be a user and publication to the prejudice of letters patent to be afterwards granted, so that he may be in a condition to describe in his complete specification, as the result of his experience, the best manner of performing the invention. It clearly appears, therefore, that the complete specification is, in a sense, supplemental to the provisional specification, not going beyond or varying from it as to the nature of the invention, but conveying additional information which may have been acquired during the currency of the provisional specification, as to the manner in which the invention is to be performed." (b)

In the case of *Newall's Patent*, (c) where the invention was an apparatus employed in the laying of submarine telegraph wires, the provisional specification, although giving certain details, did not mention the use of rings of iron to control the rope when going out at a rapid speed.

Referring to the insertion of this in the complete specification, Lord Chelmsford said: "It certainly might have been argued in that case that, although it was not necessary to state more in the provisional specification than the nature of the invention, yet if the inventor takes upon himself to go further and introduce a description of the manner of carrying it out, he thereby limits himself to that description, and the complete specification going beyond it rendered the patent void. But the Court of Common Pleas thought that all they had to look to was whether the provisional specification sufficiently described the nature of the invention, in compliance with the Statute, and that the not entering into a detail of all the means by which it was to be accomplished was immaterial." (d)

On the same subject, Lord Blackburn, in *Bailey v. Robertson*, (e)

(a) 15 & 16 Vict. c. 83.

(b) *Penn v. Bibby*, L. R. 2 Ch. 132; 36 L. J. Ch. 459.

(c) 4 C. B. (N. S.), 269.

(d) *Penn v. Bibby*, L. R. 2 Ch. 133; 36

L. J. Ch. 459.

(e) L. R. 3 App. Ca. p. 1075.

where the specification had also been filed under the Act of 1852, said: "When the nature of an invention has been described in the provisional specification, if something were found out during the six months to make the invention work better, or with respect to the mode in which the operation may be performed—a thing which is very likely to happen when, in carrying out his invention, the inventor finds that some particular bit will not work so smoothly as he expected, and it is necessary to add a little supplement to it—still, the nature of his invention remains the same, and it is no objection that in the complete specification, which comes afterwards, the invention or application is described more particularly and in more detail, or even if it be shewn that there has been more discovery made, and so as to make the invention which he has described in the provisional specification really workable. If nothing more has been done than that, I think it is good; but as soon as it comes to be more than that, and the patentee says, in the provisional specification, I describe my invention as A., and in the complete specification he says, I hereby describe A., and also B., then as far as regards B. it is void, because the letters patent were granted for the invention that was described in the provisional specification, and do not cover the invention that is described in the other."

In *Lucas v. Miller*, (*f*) the plaintiff's patent was for an improved bicycle lamp. The lamp was constructed for suspension from the hub of the wheel between the wire spokes. In an action for infringement the defendants objected that the patent was void for disconformity, on the ground that the plaintiff had inserted and claimed in his complete specification a detail which was really an independent invention not disclosed in the provisional specification.

In overruling this objection, Kay, J., said: "After the plaintiff had lodged his provisional specification it occurred to him that he might add another small improvement, which was a mode of attaching the washers within the barrel, and for that purpose he made two rims within the two halves of the barrel, of such a kind that you could slide into them, by a kind of rotating sliding motion, a little tin case, within which the leather washer was held. Having invented that, he described it in his complete specification. . . . Now, first of all, it is said that this patent is bad because the complete specification differs from the provisional. However, that, upon the evidence before me, cannot be maintained for a

(*f*) 2 R. P. C. p. 155.

moment, because the reason why it so differs is that this rim and mode of attaching the washers was not invented at all at the time of the provisional specification. No possible objection can be raised to the complete specification because it is described there."

On the further objection that it was not only described but claimed, the learned judge said: "But, then, the answer one would make at once, without referring to authority, is this; it could not possibly be claimed in the provisional specification, because it was not invented; and, secondly, it is not the function of a provisional specification to claim anything. The claim is, in point of fact, a disclaimer: it shews what parts, and what parts only, of the whole invention you mean to protect by your patent. Here the plaintiff does not attempt to claim by his complete specification any new invention entirely separate and apart from that which was described in the provisional specification; but having described the mode of opening the lamp and barrel, it occurs to him that it would be an improvement on that particular form of lamp to which his improvement is specially adapted, to have a rim within the barrel into which he could slide these washers. Now, is that an invention so completely apart from the invention described in the provisional specification that it makes the complete specification bad, because it is a part of the claim in the complete specification? In my opinion it most clearly is not."

The question of disconformity was very fully considered in connection with the *Welch Patent*, granted for a mode of securing rubber tyres to metal rims or felloes on the wheels of cycles and other light vehicles. In the *Pneumatic Tyre Company v. Caswell*, (g) the Court of Appeal, affirming Kekewich, J., held the patent good. It was, however, again strenuously attacked on the ground of disconformity, in the later action of the *Pneumatic Tyre Company v. the East London Rubber Company*. (h) In this action the defendants contended that the patentee's provisional specification did not indicate that the invention was applicable to pneumatic tyres, but suggested its use with rubber tyres only, and that inasmuch as the complete specification claimed the invention for the purpose of attaching pneumatic tyres to cycle wheels, it exceeded the provisional and claimed a further invention. The remarkable success which pneumatic tyres were about to achieve had undoubtedly not been present to the mind of the inventor when the provisional specification of this patent was drawn, and it was accordingly

(g) 13 R. P. C. 164, 375.

(h) 14 R. P. C. 77, 573.

alleged by the defendants that the enlarged claim in the complete specification was an attempt by the inventor to take advantage of those developments in the tyre industry between the filing of his two specifications which were due to the ingenuity of others. The Court, however, again upheld the patent; Romer, J., in a judgment afterwards affirmed on appeal, holding that the word rubber, as used in the provisional specification, was wide enough to include any convex rubber tyre, and that, although the patentee had originally contemplated the use of his invention in conjunction with a convex tyre of solid, or nearly solid rubber, its use with a tyre in the form of a rubber cover attaining convexity by the internal pressure of an expanded air tube was a legitimate development of the invention indicated in the provisional specification. (i)

The Substitution in the Complete Specification of Equivalents for Matters contained in the Provisional is Permissible.—Where the patent is for a mechanical combination it is no disconformity to vary means indicated in the provisional specification, by inserting in the complete their mechanical equivalents.

In *Watling v. Stevens*, (j) the patent was for improvements in spring-tip vans. It was contended at the trial, and subsequently in the Court of Appeal, that the patent was void, because the complete specification exceeded the provisional. The complete specification contained two claims illustrated by two figures, and claim No. 1 and figure No. 1 differed from claim No. 2 and figure No. 2. It was contended that claim No. 1 and figure No. 1 were alone within the provisional specification. But Matthews, J., at the trial declined to avoid the patent on this ground, being of opinion that the two claims, though representing different methods of attaining by combination a new and useful result, were substantially equivalent in their parts and arrangement, the one to the other. The Court of Appeal took the same view. Bowen, L.J., said, "What is the patent? Really it is for a combination or arrangement of rollers, and the pushing back or tipping, with a certain control of the angle. In the original specification the control of the angle was thought to be a very important part of the combination. But when the patentee came to the final part of the specification he thought it apparently more convenient for his general purposes to adopt a form of combination in which you

(i) The Welch specifications are printed in Appendix IV., post. For recent instances of disconformity see *Osmonds*

v. Balmoral Cycle Co., 15 R. P. C. 505; *Brooks v. Lamplugh*, 15 R. P. C. 33.

(j) 3 R. P. C. 37, 147.

do not require any very special control of the angle, and was satisfied with the minimum, as I will call it, of control. But it seems to me that, nevertheless, that form of combination is really within the ambit and scope of the invention itself; and I cannot think that, once given the idea of the rollers, the pushing back, and the tipping, and that the angle might, if you wanted it, be controlled by the original slotted levers or links, the variation to the present form, in which the model has been made, and in which the second figure has been drawn, is a variation in any way of principle, but a simple substitution of what really is a mechanical equivalent."

With *Watling v. Stevens* may be compared the case of *Woodward v. Sansum*. (k) In that case the patentee introduced into his provisional specification, not only a description of the nature of his invention, but also a detailed account of how to perform it. This, it was subsequently contended, limited him to the same method in his complete specification. The Court held, however, that this objection ought not to prevail, so long as the new method did not involve any departure from the nature of the invention, but was merely an alternative mode of putting the invention in practice—a transposition of mechanism with the same object and producing the same result.

Colton, L.J., said: "I think that although there is a different mode of carrying out the improvement contemplated by the plaintiff in his second patent, and described in sheet three, from that which is described in the provisional specification, the whole of it comes within the invention, the nature of which he has described in his provisional specification. It is true that in his provisional specification he has stated a different mode of carrying his invention into effect from that which he stated in sheet three of his complete specification; but if both are really within the same invention described, though not minutely but in general terms, in the provisional specification, then the patent will not be bad, simply because a different mode of carrying the same invention into operation is described in the complete specification, and even although that may be an improvement on what is described in his provisional specification, because a patentee putting in a provisional specification shewing the nature of his invention is not bound to describe the way in which that can be carried into effect and operation; but if he does describe a way of doing it, and before he files his complete specification he either

(k) 3 R. P. C. 357; 4 R. P. C. 177.

finds out improvements in that way or a different way of carrying into effect that which is described as his invention in the provisional specification, he is bound to give the public the benefit of what he has discovered as regards the mode of carrying the invention, the nature of which must be described in the provisional specification, into effect, even although there may be improvement and even invention which was not known to him at the time." (l)

In *Gadd v. the Mayor of Manchester*, (m) the object of the plaintiff's invention was to keep the bottom rim of a gasometer always horizontal, so that the gasometer would, as it rose and fell, remain always in a vertical position, and so preserve its stability. In the provisional specification the patentee mentioned racks and cogwheels and wheels geared together with chains as the means to be employed. In his complete specification another method, in which racks and cogwheels were dispensed with—an arrangement of chains fastened at both ends but passing over ordinary fixed pulleys, was shewn. On the objection that this difference amounted to disconformity between the specifications and avoided the patent, Lindley, L.J., said: "Here again the case of the present plaintiffs is near the line; but I have come to the conclusion that the plaintiffs have not overstepped the limits within which the law requires a patentee to keep. This part of the case turns entirely on the view taken of the nature of the plaintiffs' invention. My view is that they sought and obtained protection for an invention for keeping the bottoms of gasometers horizontal without the use of an external framework, but, instead thereof, by mechanical means such as are described in the provisional specification. But the plaintiffs were not tied to those particular means. A patentee is not prevented from improving the means of carrying out the invention for which he obtains provisional protection. On the other hand, he must not, under colour of an improvement, obtain the advantages of provisional protection for an invention the nature of which he has not described in his provisional specification (see *Bailey v. Robertson* (n) and *Vickers v. Siddell* (o)). The whole object of provisional protection is to enable a patentee to work at and improve his invention without risk of invalidating his patent by premature publication or user. (p) The only limit set to what he can do in this respect is that the invention as finally specified

(l) 4 R. P. C. p. 174. See, also, *Siddell v. Vickers*, 5 R. P. C. pp. 426, 427; L. R. 39 C. D. 92.

(m) 9 R. P. C. 516; see p. 526.

(n) 3 App. Ca. 1055.

(o) 15 App. Ca. 496; 7 R. P. C. 306.

(p) 46 & 47 Vict. c. 57, s. 14.

must not be a different invention from that provisionally protected. Now, to hold in the present case that the arrangement shewn in Fig. 16 in the plaintiff's complete specification is an invention of a different nature from that described in the provisional specification is, in my opinion, to take too narrow a view of the plaintiff's real invention, and to miss its essential character. Although it is quite true that the object of the patent being old the patentee must be tied down to the modes of attaining that object described and claimed by him, it is, in my opinion, wrong in point of law, even in cases of this kind, to tie him down to the particular methods shewn in the provisional specification. But it is only by so tying him down that his patent can be held bad for want of conformity. Even under the present law the Court may be driven to hold a patent invalid on the ground that the invention described and claimed in a complete specification is not the same as that provisionally protected; but having regard to the provisions made for the comparison of the two documents by an official examiner (*q*) the Court ought not to decide against the validity of a patent on the ground in question, unless the two inventions are unmistakably different. If a case is on the border line the patent ought to be held good rather than bad."

In *Miller & Company v. Scarle*, (*r*) the invention was an improved clip for mounting the lamps of velocipedes. It was contended that the patent was bad for variance between the provisional and complete specifications. The object of the inventor was to remedy the misfittings which sometimes occurred through there being no standard size for the brackets and clips used in attaching lamps to bicycles. The remedy proposed was an arrangement of a socket by which the clip with a screw could be fastened to the bracket. In the provisional specification only one clip and one action was mentioned. The complete specification included two clips and a double action. Commenting on this Bowen, L.J., said: "I regard the addition of the double action as a development and an improved arrangement, but it is simply, to my mind, the addition of a possibly better arrangement, and of a useful mechanical equivalent. To my mind, the patentee, when the complete specification was filed, if he had this altered adjustment in his mind, was bound to disclose it to the public, and was bound to give the public the benefit of all that he knew about this mechanical equivalent, which, I will assume for the moment, to be an improved adjustment, and so doing, has he thereby invalidated his patent? It seems

(*q*) See 46 & 47 Vict. c. 57, s. 9; 51 & 52 Vict. c. 50, s. 4.

(*r*) 10 R. P. C. 106.

to me nothing but a performance of his duty to the public, and there is therefore no variance which could invalidate this patent." (s)

The Complete Specification may Omit Matters Contained in the Provisional Specification.—The omission from the complete specification of something mentioned in the provisional will not invalidate a patent, if the character of the invention remains the same and the ambit is not enlarged. Such an omission acts in the way of a disclaimer, and the law offers no objection to a patentee curtailing his invention in this way, though it will not allow him to extend it.

In *Nickels v. Haslam*, (t) the title was "Improvements in the manufacture of plaited fabrics." The specification only shewed an improvement, and this, it was contended, avoided the grant. Tindal, C.J., said: "The case resolves itself very much into the case of *Cook v. Pearce*, (u) where an objection was taken that the title of the letters patent was larger than the specification, and the Court of Exchequer held that that ground was sustainable only where it could be inferred that some fraud had been thereby practised on the Crown, or some detriment sustained by the public."

The law was similarly laid down by Erle, C.J., in *Thomas v. Welch*. (v) "It is said in the first place that the complete specification is void, because it omits some of the inventions put forward in the provisional specification. The provisional specification describes an instrument, and then says that 'This, or another acting therewith, acts to hold the work during the insertion of the needle.' It is said that the complete specification contains nothing corresponding to this second alternative. Assuming that this is so, I do not think that the objection ought to prevail. The difference is a slight one, and injured nobody; and it might be that the patentee had something in his mind when he filed his provisional specification which he found afterwards would be useless. If such had been the case after the filing of the complete specification, he could have filed a disclaimer; but as he could not disclaim formally part of the provisional specification, he might, I think, in such a case as the present, have omitted it from his complete specification."

So, too, in *Penn v. Bibby*, (w) Lord Chelmsford, C., said: "Nor

(s) 10 R. P. C. p. 111.

(t) 7 M. & G. 378; 13 L. J. C. P. 146;
8 Scott (N. R.), 103.

(u) 8 Q. B. 1044; 12 L. J. Q. B. 187;

13 L. J. Q. B. 189.

(v) L. R. 1 C. P. p. 201; 35 L. J. C. P.
200.

(w) L. R. 2 Ch. 134; 36 L. J. Ch. 460.

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

In *Stoner v. Todd*, (x) Jessel, M.R., laid down the rule in similar terms. "When we find in the final specification that in the description of one of the subordinate matters of the invention one of the details has been abandoned, that is a notification to the public that the inventor could not work it, or thought it useless, and has consequently omitted it altogether."

In *Gaulard & Gibb's Patent*, (y) the provisional specification contained the words, "An unlimited number of inductive coils." This statement was found to be erroneous, and was changed in the complete specification to "a number of inductive coils," and this was held not to avoid the patent.

In the *Pneumatic Tyre Company v. East London Rubber Company*, (z) the patentee described in his provisional specification two modes of fastening rubber tyres to cycle rims, but only included one in his complete specification. On this Romer, J., said: "If, in a provisional specification which describes a valuable part of an invention, there is also described as an alternative part something which turns out not to be valuable, and is abandoned in the final specification, such abandonment does not affect the validity of the claim for the invention, disregarding the omitted alternative part, or deprive the patentee of the right to say that he first discovered and gave to the public the benefit of the valuable part which was retained." (a)

In *Aktiebolaget Separator v. Dairy Outfit Company*, (b) where the invention related to improvements in centrifugal separators used for separating the cream from milk, the patentee described in his

(x) L. R. 4 C. D. p. 60; 46 L. J. Ch. p. 33.

(y) 5 R. P. C. 533.

(z) 14 R. P. C. 77.

(a) Ibid. p. 98.

(b) 14 R. P. C. 473; 15 R. P. C. 327.

provisional specification various modes of effecting the partitioning up of the centrifugal bowl, which was the essence of his invention. In his complete specification he abandoned all of these except one, viz., placing a number of conical plates above each other inside the bowl in such a manner as to leave a narrow space between the upper surface of each lower plate and the lower surface of each upper plate, and thus produce narrow inclined radial passages. This he found was the best mode of giving effect to his invention; and it was held no objection to his patent that he had abandoned the others.

Good Faith towards the Public.

The Patentee must Make a Full and Candid Disclosure of his Invention.—An inventor must also in his complete specification observe good faith towards the public. The full disclosure of his discovery has been said to be the price by which the patentee buys his monopoly, (c) and that price the law expects him to pay with candour and without reserve. Any attempt upon his part to withhold any part of it will undoubtedly be fatal to his grant, should the patent be contested in a court of law. On this point many authorities might be cited.

In *R. v. Arkwright*, Buller, J., said: "It is clearly settled at law that a man, to entitle himself to the benefit of a patent for a monopoly, must disclose his secret and specify his invention in such a way that others may be taught by it to do the thing for which the patent is granted, for the end and meaning of the specification is to teach the public after the term for which the patent is granted, what the art is, and it must put the public in possession of the secret in as ample and beneficial a way as the patentee himself uses it. This I take to be clear law, as far as it respects the specification, for the patent is the reward which, under the Act of Parliament, is held out for a discovery; and, therefore, unless the discovery be true and fair the patent is void." (d)

Again, in *Turner v. Winter*, Ashurst, J., said: "I think that as every patent is calculated to give a monopoly to the patentee, it is so far against the principles of law and would be a reason against it were it not for the advantages which the public derive from the communication of the invention after the expiration of

(c) As to this phraseology see ante, p. 158.

(d) 1 W. P. C. 64; Dav. P. C. 61.

the time for which the patent is granted. It is, therefore, incumbent on the patentee to give a specification of the invention in the clearest and most unequivocal terms of which the subject is capable. And if it appear that there is any unnecessary ambiguity affectingly introduced into the specification, or anything which tends to mislead the public, in that case the patent is void." (e)

In *Hornblower v. Boulton*, (f) Grose, J., discussing the requirements of a specification, said: "The aim of the legislature is obvious; on the one hand, it was to encourage ingenious artificers and able and studious men to invent and bring forward for the use of the public new manufactures, the produce of their own ingenuity, by holding out to them the reward of fourteen years' monopoly; on the other hand, to secure to the public the benefit of the discovery, by causing to be enrolled a complete description of the thing to be done, and the manner of doing it, that others might be fully informed of it; and at the end of the fourteen years be enabled to work or make the manufacture of which the patentee was the inventor. . . . The benefit to the public is from the specification disclosing to the world how others may make or use the same manufacture; without the specification the public have not that information."

So, too, in *Lewis v. Marling*, (g) Bayley, J., said: "To support a patent it is necessary that the specification should make a full disclosure to the public. If the patentee suppresses anything, or if he misleads, or if he does not communicate all he knows, his specification is bad; but if he makes a full and fair communication, as far as his knowledge extends, he has done all that is required."

"If," said Tindal, C.J., discussing the specification in *Galloway v. Bleaden*, "there is a want of clearness, so that the public cannot afterwards avail themselves of it, much more if there is any studied ambiguity in it, so as to conceal from the public that which the patentee for a term is enjoying the exclusive benefit of, no doubt the patent itself would be completely void." And again: "The main question is whether it is such a fair and clear statement that a person with a competent degree of knowledge upon the subject-matter to which the patent relates would be able to make that which the plaintiff now enjoys the exclusive privilege of." (h)

(e) 1 W. P. C. 77; 1 T. R. 606; approved by Fry, J., in *Wegmann v. Corcoran*, 13 C. D. 77; 27 W. R. 357.

(f) 8 T. R. p. 100; Dav. P. C. p. 227.

(g) 4 C. & P. 57; 10 B. & C. 26; 1 W. P. C. 496.

(h) 1 W. P. C. 525.

The Specification must not be Equivocal.—The language of the specification, therefore, must not be so equivocal as to leave the public in doubt as to its true meaning.

In *Hastings v. Brown*, Lord Campbell, C.J., said: “It is clear that the patentee ought to state distinctly what it is for which he claims the patent, and describe the limits of his monopoly. That is not done by this specification. The claim is for an invention by which a single windlass may raise cables of different diameter, which is allowed to be a great improvement. But is that pointed out by the specification? The words are at best equivocal. If he claims for a windlass that is fitted for one cable only, of whatever size, there is no novelty; and the vice of the specification is that it does not assert that more can be done by the invention. The title tells us nothing. The words of the specification are, ‘A chain cable of any size.’ ‘A.’ applies to one only; at all events the phrase is capable of that meaning; and the specification, if it be equivocal, is bad. I see nothing in the words or in the drawing that necessarily indicate the contrivance to be for fitting more than one cable. You might make a windlass according to the drawing which would do no more than that. The specification therefore is bad, and there must be a non-suit.” (i)

“The law is admitted,” said Coleridge, J., in the same case; “if the specification upon a fair interpretation be equivocal, it is insufficient.” (j)

“You must not,” said Jessel, M.R., in *Plimpton v. Malcolmson*, “give people mechanical problems and call them specifications.” (k)

In *Gandy v. Reddaway*, (l) the patent was for improvements in belts or bands for driving machinery. The object of the inventor was to provide a band which would not give out through stretching, which would not be affected through variations of the atmosphere, and which would run round small pulleys without cracking. To attain these results he employed cotton canvas “hard woven,” prepared in a particular manner. Different kinds of canvas were required for different sizes of pulleys. But this fact the specification did not indicate. In an action for infringement, Pearson, J., held the patent bad, and the Court of Appeal, although strongly of opinion that the invention was a useful one, affirmed his judgment.

Lindley, L.J., said: “The patentee says the object of his invention is to manufacture belts for driving machinery, of cotton

(i) 1 E. & B. p. 453.

(j) Ibid. p. 454.

(k) 3 C. D. p. 576.

(l) 2 R. P. C. 49.

canvas which will not give out by stretching, and will not be affected by variations of the atmosphere, and, at the same time, will run round small pulleys without cracking. He tells you what is to be used for the purpose of making these belts. . . . Cotton canvas, 'hard woven.' . . . When you come to read the specification, and read it through, there is nothing whatever to lead anybody who knows nothing at all about the matter, to come to the conclusion that one sort of hard canvas will do for one sort of pulleys, and another sort for another kind of pulleys. Persons unacquainted with the subject-matter would infer that any hard canvas prepared in this way would do for any pulleys. The evidence is striking. It shews that this is not true. The evidence shews that there are various sorts of hard canvas . . . known in the market, described and indicated by Nos. 1-10, and the evidence shews that No. 1 will not do for small pulleys, and No. 10 will not do for large pulleys, or for large machines. . . . Stopping there, that shews that the specification is misleading; but it could be got over, and it might be got over by evidence to shew that a person having the ordinary acquaintance which a workman making belts would have, would have known of that, and that nobody with a competent knowledge of the subject-matter would dream of putting No. 1 on to a small pulley, or No. 10 on to a large pulley. That might be so, but there is no evidence of it." (m)

The Specification must not contain False Suggestions.—If a patentee suggests in his specification materials or proportions which will not answer the purpose, the patent cannot be supported, for the public are misled. (n)

In *Turner v. Winter*, (o) the specification directed (*i.a.*) that the following materials were to be used in the process—"sea salt, or sal gem, or fossil salt, or any marine salt." Fossil salt was a generic term, including sal gem as well as other species of fossil salt. Sal gem, it was proved, was the only salt that would answer the purpose. The specification also professed to produce white lead as one of the results of the process. In fact, the product was only something like common white lead, and answering some of its purposes. On these facts the Court were of opinion that the patent was bad.

Ashurst, J., said: "I understand that sal gem is the only one [fossil salt] which can be applied to this purpose; so that,

(m) 2 R. P. C. p. 54.

(n) As an instance of a patent recently revoked for false suggestion, see *Owen's*

Patent, 17 R. P. C. 68.

(o) 1 W. P. C. 77; 1 T. R. 606.

throwing in 'fossil salt' can only be calculated to raise doubts and mislead the public. That word could not have been added with any good view; it must produce many unnecessary experiments; therefore, in that respect, the specification is not so accurate as it ought to have been." (p)

In the same case, Buller, J., said that if the patentee only achieved his process with two or three ingredients, and yet inserted others that would not answer, the patent was void. So, too, if he made the article with cheaper materials than the specification suggested, even although the dear ones answered the purpose; for he did not enable the public to derive the same benefit from the invention as he had himself. (q)

If the invention is a simple one, the patentee must not so clothe his description of it in obscure or ambiguous words as to convey to the public the impression that the performance of the invention is a difficult and complicated operation. Such a description lacks candour, and will avoid the patent.

In *Savory v. Price*, (r) the patent was for a method of making Seidlitz powder. The specification gave three distinct recipes for preparing the ingredients, and then directed two scruples of each of the three ingredients resulting from those recipes to be dissolved in half a pint of water, in order to produce the Seidlitz powder. The result was new and useful; but it appeared that the three recipes were only common processes for preparing three well-known substances, which were sold in shops before the date of the patent, viz. Rochelle salts, carbonate of soda, and tartaric acid. If the specification had directed those three substances to be combined in the required proportions the result would have been the same Seidlitz powder. The specification, however, gave only the recipes for making these ingredients, and not their names—indicating that the making of them was part of the patent method for producing Seidlitz powder. In an action for infringement the plaintiff was non-suited. Abbott, C.J., said: "It is the duty of a patentee to specify the plainest and most easy way of producing that for which the patent is granted, and to make the public acquainted with the mode which he himself adopts. By reading this specification, we are led to suppose a laborious process necessary to the production of the ingredients, when, in fact, we might go to any chemist's shop and buy the same things ready made. The public are misled by this specification, which tends

(p) 1 W. P. C. p. 80.

(q) Ibid. p. 81.

(r) 1 W. P. C. 83, n.; Ry. & M. 1.

to make people believe that an elaborate process is essential to the invention ; it cannot be supported."

So, too, the patent will be void if the patentee suggests generally to the public that other materials than those specified by him as suitable for carrying out his invention may be used for that purpose, when in reality he has tried by experiment and failed to discover any other material that will answer.

Thus, in *Crompton v. Ibbotson*, (s) where the patent was for an improved method of drying and finishing paper, the specification contained these words: "The invention consists in conducting paper by means of a cloth or cloths against a heated cylinder, which cloth may be made of any suitable material ; but I prefer it to be made of linen warp and woollen weft, which cloth is shewn in the drawing by blue lines." It was proved that the patentee, who had tried various other materials without success for this purpose, really knew of no other conducting medium which would serve the purposes of his invention. In an action for infringement the patentee was non-suited. After argument to set aside the non-suit, Lord Tenterden said: "The patent was obtained for the discovery of a proper conducting medium. The plaintiff found, after repeated trials, that nothing would serve the purpose except the cloth described in his specification ; yet he says the cloth may be made of *any suitable* material, and merely that he *prefers* the particular kind there mentioned. Other persons, misled by the terms of this specification, may be induced to make experiments which the patentee knows must fail ; and the public, therefore, has not the full and entire benefit of the invention—the only ground on which the patent is obtained."

But a general statement in a specification that the invention claimed is capable of application to other purposes beyond those for which in that specification protection is claimed will not invalidate a patent. (t)

How far Proportions must be Specified.—A specification which states proportions which will not work is bad, being calculated to deceive the public ; but where the invention consists in the use of old materials in new proportions, the specification is not bad for uncertainty merely because the inventor, after stating the best proportions, does not limit himself to those precise proportions.

In the *Patent Type-founding Company v. Richards*, (u) the specification stated that, in the manufacture of type, it had been

(s) Dan. & L. p. 33 ; 6 L. J. (O. S.)
K. B. 214.

(t) *Cole v. Saqui*, 5 R. P. C. 495.

(u) *Johnson*, 381 ; 6 Jur. (N. S.), 39.

usual, for the most part, to employ antimony, with a small proportion of tin; that the object of the invention was to obtain harder, tougher, and more enduring type, by employing tin in large proportions with antimony, and to greatly reduce, or wholly omit, the use of lead; that the best proportions were 75 of tin and 25 of antimony, but that this might be varied to some extent; that when lead was used it should not exceed 50 parts in 100; and that when the antimony was pure, the best proportions were as given above, but that when it contained other metals, the proportion used should be diminished.

Wood, V.C., holding the specification sufficient, said: "Though the inventor does not bind himself to particular proportions, his specification states of what the essence of his invention consists, viz., 'new and large proportions.' It will be for experts in the trade to say whether a hard, tough, and enduring metal was formed by the old proportions, whether the invention is new, and whether the addition of a half or one per cent. would be an evasion of it."

So, likewise, in *Neilson v. Betts*, Lord Westbury said: "If, it is said, a particular detailed process be claimed, the claim is defective and void, for the proportions of the ingredients used are not given. Now, in the first place, certain proportions are given by *Betts* in his patent, and they consist in the relative thickness of the lead and tin. The lead he takes by way of preference at a thickness of a quarter part of an inch; the tin he takes by way of preference at a twentieth part of the thickness of the lead—that would be the eightieth part of an inch. But he assigns these relative proportions, not as things which are in themselves unchangeable, but as being the best for the purpose which he desired to accomplish, and they are given rather as illustrations of the mode of user of the process than as certain definite termini, which could not be exceeded or diminished either on the one side or the other. I find, therefore, no objection to the validity of the patent on the ground of the uncertainty of the proportions given, or the necessity of having more definite and certain proportions stated." (v)

If Ingredients Required can only be Obtained Abroad, this Fact must be Disclosed.—Any knowledge which the patentee possesses at the time of filing his specification which it will be essential to the convenience of the public performing it to know, must be disclosed.

(v) L. R. 5 H. of L. p. 21; 40 L. J. Ch. p. 329. As an instance of a patentee being limited to the proportions specified by him, see *Maxim-Nordenfelt Co. v. Anderson*, 14 R. P. C. 671; 15 R. P. C. 421.

Thus, when it was shewn that the patentee in a patent for trusses for ruptures had omitted what was very material for tempering steel, which was rubbing it with tallow, Lord Mansfield held the patent void. (w)

In *Sturtz v. De La Rue*, (x) the specification described one of the ingredients used in the patentee's process as "the purest and finest chemical white lead." The finest white lead which could be obtained in this country would not answer the purpose. What the patentee used was a purer material, which was imported from Germany. The specification did not disclose this fact. The patent was held void. "It is a principle of patent law," said Lord Lyndhurst, "that there must be the utmost good faith in the specification. It must describe the invention in such a way that a person of ordinary skill in the trade shall be able to carry on the process. Here, the specification says that there is to be added to the size certain proportions 'of the finest and purest chemical white lead.' A workman would naturally go to a chemist's shop, and ask for 'the finest and purest chemical white lead;' the answer which he would receive would be, that there was no substance known in the trade by that name. He would be compelled to ask for the purest and finest white lead; and, according to the evidence, the purest and finest white lead that can be procured in London will not answer the purpose. It is said that there is a substance prepared on the Continent, which is white lead or some preparation of white lead; and that, by using it in the manner described in the specification, the desired effect is produced. If that be so, the patentee ought to have directed the attention of the public to that circumstance. He ought to have said, 'The purest white lead which can be obtained in the shops in London will not do; but there is a purer white lead prepared on the Continent, and imported into this country, which alone must be used.' 'The purest and finest chemical white lead' must mean the finest and purest white lead usually gotten in the general market for that commodity, unless the public be put on their guard by a statement, that what would be called very fine and pure white lead, in the ordinary sense of the trade, will not answer, but that the white lead used must be of a superlatively pure and fine quality, prepared in a particular way, and to be gotten only in a particular place. If the article is not made in this country, but may be imported, it would be necessary to mention that circumstance. . . . It appears to me

(w) *Liardet v. Johnson*, Bull, N. P. 76.

(x) 7 L. J. Ch. 47; 5 Russ. 322.

that this specification does not give that degree of full and precise information which the public has a right to require."

In *Derosne v. Fairie*, (y) the patent was for improvements in the means of extracting and refining sugar. One of the methods was the application of a filter formed of the charcoal of bituminous schistus. The bituminous schistus commonly known in this country contained sulphuret of iron. But iron was injurious to the patentee's process, and such bituminous schistus could not be used unless the iron was first extracted. The plaintiff used a form of bituminous schistus which had undergone a process of distillation, and which had been made into charcoal in a foreign country. But his specification contained no hint that it was necessary to treat the material in order to remove the obnoxious iron, nor did it shew any means by which the iron might be extracted successfully. Lord Abinger, C.B., in directing the jury, said: "The specific point requiring your attention is as to the bituminous schistus, whether the plaintiff has fairly communicated to the world engaged in this sort of trade, what his object was. For he must give a full and true disclosure of the nature of the invention, and if he leaves any part of his invention in a state of obscurity, and does not give definite directions how to perform it, he loses the advantage of his patent. The bituminous schistus is put first, and forms, undoubtedly, a very important part of the invention, and persons not acquainted with the sciences may be well excused for not knowing what bituminous schistus is, and, *prima facie*, it is no objection to the specification that those terms must be explained by some men of art. *Mr. Faraday* and the other chemists say there are many kinds of bituminous schistus, that they vary very much in the quantity of the sulphuret of iron which they contain, and that they do not know any process by which the sulphuret of iron can be completely expelled. The plaintiff says the sulphuret of iron ought to be expelled, but he does not state which of the various bituminous schistuses he uses, or any process of expelling the sulphuret of iron."

The jury gave their verdict for the plaintiff. But in the Court of Exchequer a rule for a new trial was made absolute. In his judgment, Lord Abinger, C.B., said he felt he ought to have ordered a non-suit at the trial. "The plaintiff was bound either to have shewn that there was some known process of extracting the iron, which he did not, or to have shewn that there was some bituminous schistus which might be found in England, with

the iron not entirely extracted, that yet might be used with effect."

The patentee must disclose in his complete specification each step necessary for putting his invention in use. The omission of one such step will avoid the patent. Thus, in *Gaulard & Gibb's* (z) *Patent*, where the invention consisted in a new system of distributing electricity for the production of light and power, the complete specification stated that the quality and value of the induced currents would depend on the special construction of the electrical generators, but there was no statement shewing in what such special construction consisted. The specification was held insufficient. Kekewich, J., said: "A patentee is bound to tell the public in his specification not only what his invention is, but how practical effect is to be given to it, and if the invention be a machine, how that machine can be manufactured. If there are many different ways of effecting the entire object, or any particular part of it, he is not bound to specify them all in detail—but he is bound to give such instances—selections, it may be, from a particular class—as will enable a competent workman to know what he ought to use, and he is further bound to refer to those instances, or the class from which they come, in language which leaves no doubt what articles are, and what are not, applicable to the production of the intended result. This is important for two reasons. First, in return for his monopoly the patentee is bound to put the public in possession, as far as description can do it, of his invention in principle and detail; and secondly, as a condition of being entitled to restrain other operators from producing his result by the same means, he is bound to tell them precisely what they cannot do except under the penalty of an injunction, with its serious consequences, and thus to indicate what can be done safely. This is not less true where the patent is for a combination than in any other case. Indeed, I am not sure that the obligation ought not in such a case to be particularly strict. If a man says, 'I claim to have protected as my invention three things combined which, though separately well known, have not been before used together,' it is reasonable and right that he should state exactly what each of these three things is; and if any of them belongs to a class comprehending several varieties, then also which of the varieties are intended; and this, of course, he can easily do, as admittedly the combined items are well known." (a)

A Defective Specification cannot be Cured by Supplemental

(z) 4 R. P. C. 525.

(a) Ibid. p. 534.

Instructions.—Nor will it help the patentee in such case to prove that he has supplemented his defective specification by instructions sent to his agents which remedy the defective proportions inserted in the specification.

In *Pooley v. Pointon*, (b) the patentee in the same year in which he took out his patent sent instructions to his agents correcting the specification, which had stated proportions, etc., that would not achieve the result aimed at, viz. the making of malt bread. These he subsequently still further corrected under the heading “Revised Formulæ,” suggesting new proportions of the required ingredients. Pearson, J., held the patent invalid. “The proportions in the specification were nothing more than guess work; that, the patentee has shewn himself, by altering them from time to time, by issuing revised formulæ according to which his bread was to be made; and I come to the conclusion, therefore, that the specification was not that which the patentee was bound to lodge if he was to have any benefit from this patent.” (c)

With *Pooley v. Pointon* may be compared the case of *Coles v. Baylis*. (d) There the patent was for a mode of preparing lithographic printing surfaces. The language of the specification was clear, and it was not suggested that the invention could not be made from the specification. But the patentee issued further instructions for the use of the stone when prepared, and it was argued that these should have been included in the specification. Bacon, V.C., refused, however, to accede to that argument. The invention, his honour pointed out, was for the preparation of the stone, not its use when prepared. The specification disclosed a perfectly successful way of preparing the stone, and the fact that the patentee issued instructions as to its employment when made was no impeachment of the patent, for they were in no way essential to the performing of the protected invention.

Unconscious Disclosure by Patentee.—In *Badische Anilin und Soda Fabrik v. La Société Chimique und Wilson*, (e) the question was discussed whether a patent would be good notwithstanding the fact that the patentee was ignorant that the presence of a particular ingredient in his process was essential to its success, if in his complete specification he specified something which included that ingredient, and so unknowingly and blindly, as it were, in fact indicated a successful mode of achieving the object in view.

(b) 2 R. P. C. 167.

(c) *Ibid.* p. 172.

(d) 3 R. P. C. 178.

(e) 14 R. P. C. 875; 15 R. P. C. 859.

The plaintiffs in this case claimed the production of a dye called "6 G," or di-alkyl-rhodamine ester. The specification contained (*i.a.*) the following direction, "Heat about one part of di-ethyl-rhodamine hydrochlorate, dissolved in about four parts of ethyl- or methyl-alcohol in an autoclave." Those two ingredients alone would not produce the result; in fact, the presence of a third, namely iron, was necessary. The specification contained no mention of iron as an ingredient in the process. The defendants accordingly contended that the patent was bad for insufficient specification. It was proved in evidence that autoclaves of iron (which were the cheapest obtainable) would generally be used by dye manufacturers, but that dye makers sometimes also used autoclaves protected by enamelling. The plaintiffs themselves had always used iron autoclaves, and thus unconsciously obtained the benefit of the presence of iron, by which the hydrochloric acid (the absorption of which was essential to the production of the pure product claimed) had been taken up. The Court of Appeal, affirming Wills, J., held the specification insufficient, on the ground that it gave no indication that it was essential to perform the process in autoclaves composed solely of iron.

On the question as to how far the ignorance of the plaintiffs that iron was an essential ingredient would have vitiated their patent, had they in fact described an iron autoclave as the kind of autoclave to be used in working their process, Vaughan Williams, L.J., said: "Now, assuming iron to be essential, it is plain that the patentee did not know it was essential; but if he has indicated it in the specification, he has done so by an accident. Indeed, neither *Dr. B.* nor the chemists of the defendants seem, until quite late in the hearing of the case, to have suspected the presence in this process of hydrochloric acid, or any other acid which would induce a prudent manufacturer to use a protected autoclave; but the patentee is not bound to indicate theory, only practice, and the fact that he had hit upon something which was practically essential—if he has done so by a fluke does not matter—the question is, has he so indicated an iron autoclave that a manufacturer reading the specification would naturally use an iron autoclave? . . . Even if by an accident the patentee happens to have given such a direction in his specification, that a dyer reading the specification would naturally use the iron autoclave, that is sufficient to save the patent." (*f*)

The Specification must Disclose the Best Means of Performing

(*f*) 15 R. P. C. pp. 368, 369.

the Invention known to the Patentee.—The rule of good faith requires of the patentee not only that he shall give to the public a means of working his invention, but also that he shall give them the best means known to him at the time, so that they may enjoy as ample a benefit from the use of his discovery as he has himself enjoyed. If his disclosure falls short of this, he imposes on the public, and the Courts will look with a very watchful eye to prevent such an imposition. (g)

Thus, if the patentee makes the article of his invention with cheaper materials than those which he enumerates in his specification, even although the latter will answer the purpose, the patent is void; for he has not placed the public in a position to derive from the discovery a benefit equal to his own. (h)

In *Wood v. Zimmer*, (i) the patent was for a method of making verdigris. The patentee used *aqua fortis* as one of the ingredients in his manufacture. This was not essential to the result, but it expedited it. The specification did not suggest the use of this ingredient. On an issue directed to be tried out of Chancery, the patent was held bad. Gibbs, C.J., said: "It is said that this patent makes verdigris, and that the specification is therefore sufficient. The law is not so. A man who applies for a patent, and possesses a mode of carrying on that invention in the most beneficial manner, must disclose the means of producing it in equal perfection, and with as little expense and labour as it costs the inventor himself. The price that he pays for his patent is, that he will enable the public at the expiration of his privilege to make it in the same way, and with the same advantages. If anything which gives an advantageous operation to the thing invented be concealed, the specification is bad. Now, though the specification should enable a person to make verdigris substantially as good without *aqua fortis* as with it, still, inasmuch as it would be made with more labour by the omission of the *aqua fortis*, it is a prejudicial concealment and a breach of the terms which the patentee makes with the public."

In *Bovill v. Moore*, (j) the same learned judge said it is a material consideration. "whether the patentee has given a full specification of his invention, not only one that will enable a workman to construct a machine answerable to the patent but one that

(g) *Turner v. Winter*, 1 W. P. C. 77;
1 T. R. 606; *Wegmann v. Corcoran*, 13
C. D. 77.

(h) *Turner v. Winter*, *supra*; *Huddart*

v. Grimshaw, Dav. P. C. 279.

(i) 1 W. P. C. 82, n.; Holt, N. P. 58.

(j) Dav. P. C. 361, p. 400.

will enable a workman to construct a machine answerable to the patent to the extent most beneficial within the knowledge of the patentee at the time; for a patentee who has invented a machine useful to the public, and can construct it in one way more extensive in its benefit to the public than in another, and states in his specification only that mode which would be least beneficial, reserving to himself the more beneficial mode of practising it, although he will so far have answered the patent as to describe in his specification a machine to which the patent extends, yet he will not have satisfied the law by communicating to the public the most beneficial mode he was then possessed of, for exercising the privilege granted to him. If *Mr. Brown*, since he obtained his patent, has discovered an improvement [in the making of lace] effected by bending the teeth [of the dividers] or adding a longer [external] tooth, he may apply that improvement, and his patent will not be affected by his using his own machine in that improved state; but if at the time when he obtained his patent he was apprised of this more beneficial mode of working and did not by his specification communicate this more beneficial mode of working to the public, that will have been a fraudulent concealment from the public, and that will render his patent void." The evidence shewed that no machine of the patentee's had existed without this improvement. "If, upon the whole of the evidence, you think this was industriously and studiously kept back from the public, that *Mr. Brown* might have an advantage over and above others that worked these machines, that will be a suppression that will avoid his patent; but if you think this was a matter which had not occurred to *Mr. Brown* at the time he invented this machine, and that it was an improvement afterwards, the validity of the patent will not be affected by it, though he will have added to his original merit of invention the further merit of being able to use his own invention more beneficially than the patent points out."

"A specification is bad," said Jessel, M.R., in *Plimpton v. Malcolmson*, "if the patentee, at the time he takes out his patent, knows of a more convenient and better form of performing the operation and conceals it from the public, and puts into his specification a less convenient and worse form. Thus, if it were a chemical patent, if, at the time of taking out the patent, he knew of cheap ingredients which would make the patented article, and also knew of dear ones, if he suppressed the cheap ones and only named the dear ones, that would invalidate the patent." (k)

(k) L. R. 3 C. D. 580.

But when a patentee indicates in his specification several methods, all of them more or less possible, for attaining the result in view, it is not necessary that he should specify which of these is the most or least advantageous.

In *Badische Anilin und Soda Fabrik v. Levinstein*, (l) the invention related to dyeing, and the specification was held to claim all the different isomers which could be described by a particular chemical formula and which were matters of the particular colours red and brown. The shade varied according to the isomer, and it was alleged that as one shade only had commercial value the specification should have indicated the respective advantages for dyeing purposes of the colours produced, and given specific directions how to produce that shade. In rejecting this contention, Lord Herschell said: "I will assume for the present that all the isomeric sulpho-acids of oxyazo-naphthaline arrived at by the process described in the claim produce red or brown colouring matters which may be used for dyeing. There can be no doubt that the different isomers so produced are colouring matters of varying shades of red and brown. And the specification undoubtedly does not point out what particular shade of either colour will be produced by any one of the alternative processes suggested, nor does it indicate which will be of the greatest practical value, either by reason of the colour it produces being one likely to be in demand, or from the greater economy in the cost of its production." After dealing with the test of commercial success as the gauge of utility, the learned Lord proceeded: "In the present case the products which result from the appellants' process are no doubt of varying worth, but one at least has proved to be of great commercial value, and it is not shewn that any of them are incapable of being used effectually for the purpose of dyeing. The invention of a process resulting in new products which may thus serve a useful purpose possesses, in my judgment, the requisite predicate of utility. And there is, I think, no obligation on the inventor in such a case as this to indicate the respective advantages for dyeing purposes of the different shades of colour produced."

A grant of letters patent does not preclude an inventor from improving his patented process. Hence, if he subsequently discovers that the use of one particular ingredient will best achieve the patented result, and in practice adopts that improvement, the fact that he had not pointed that out in his specification will not avoid his letters patent.

(l) 12 App. Ca. 710; 4 R. P. C. 464. See, also, *Kurtz v. Spence*, 5 R. P. C. 183.

In the *British Dynamite Company v. Krebs*, (m) the patentee's invention was the manufacture of dynamite by causing nitro-glycerine to be absorbed in porous unexplosive substances, such as charcoal, silica, paper, or similar materials. At the trial it was proved that a silicious earth found in Germany and known as 'Keiselguhr,' would, after being calcined and reduced to powder, absorb the nitro-glycerine better than any other substance, and yet retain its condition of powder. This material—the superior suitability of which the patentee had ascertained after his patent was taken out—was that used by his workmen. It was not suggested that the materials mentioned in the specification would not make dynamite, but that the patentee had not disclosed the best means. The Court of Appeal having held the patent bad, the House of Lords reversed their decision.

Lord Hatherley said: "If it had been proved that the inventor, *Nobel*, knew the best material, which turned out to be a material called 'Keiselguhr,' a silicious earth; if he had known of the existence of 'Keiselguhr' at the time, and that it would take up 75 per cent. of the nitro-glycerine, whereas some other materials, specified by the patentee, took up only 25 or 50 per cent., it would have been an objection to his patent to say that he, being in possession of the best mode of producing the most valuable dynamite, had not informed the public of that method. But there is nothing whatever to shew that he, at least, was so acquainted with that material at that time; on the contrary, it appears, as far as he was concerned, to have come to his knowledge afterwards, and of course he could not be expected to mention a material of which he had not had personal experience. But having found out that such materials as he specified had the effect of absorbing—that is, of taking up and retaining the nitro-glycerine—and that they had the effect of doing that more or less advantageously according to the particular materials used, he informed the public that all of them had that effect, and that similar materials would have the like effect in rendering the nitro-glycerine safe and useful." (n)

The Specification must not Leave the Public to Experiment.

A Specification which requires Experiment by the Person following its Directions is Bad.—It being the duty of a patentee to give the public a complete recipe for the performance of his invention, it

(m) 13 R. P. C. 190; Goodeve, P. C. 88.

(n) 13 R. P. C. 195.

follows that a specification which does not fulfil this requirement, but, on the contrary, leaves the public to the exercise of further invention or experiment, is bad.

In the *King v. Arkwright*, (o) Buller, J., said: "If the specification be such that mechanical men of common understanding can comprehend it, to make a machine by it, it is sufficient; but then it must be such that the mechanics may be able to make the machine by following the directions of the specification without any new inventions or additions of their own."

The same rule is further illustrated in *Turner v. Winter*. In that case the patent was for making white lead and separating mineral alkali from common salt. Ashurst, J., said: (p) "If the process, as directed by the specification, does not produce that which the patent professes to do, the patent itself is void. It is certainly of consequence that the terms of a specification should express the invention in the clearest and most explicit manner; so that a man of science may be able to produce the thing intended without the necessity of trying experiments."

"A specification," said Abbott, C.J., in *R. v. Wheeler*, "which casts on the public the expense and labour of experiment is undoubtedly bad." (q)

"If the invention can only be carried into effect," said Alderson, B., in *Morgan v. Seaward*, (r) "by persons setting themselves a problem to solve, then they who solve the problem become the inventors of the method of solving it, and he who leaves persons to carry out his invention by means of that application of their understanding does not teach them in his specification that which, in order to entitle him to maintain his patent, he should teach them, the way of doing the thing, but sets them a problem which, being suggested to persons of skill, they may be able to solve. That is not the way in which a specification ought to be framed." (s)

In *Simpson v. Holliday*, (t) where the plaintiff's patent was for "improvements in the preparation of red and purple dyes," the patentee described his process in the following manner:—"I mix aniline with dry arsenic acid and allow the mixture to stand for some time; or I accelerate the operation by treating it to, or near to, its boiling-point until it assumes a rich purple

(o) 1 W. P. C. 66 n.; Dav. P. C. 106.

(p) 1 W. P. C. p. 80; 1 T. R. 606.

(q) 2 B. & Ald. 354.

(r) 1 W. P. C. 174.

(s) See, also, Parke, B., in *Neilson v. Harford*, 1 W. P. C. at p. 371.

(t) 5 N. R. 340; 13 W. R. 577; 12 L. T. (N.S.), 99; L. R. 1 H. of L. 315.

colour," etc. It was proved that in order to produce the colour it was necessary to apply heat; but some evidence was given that a competent workman would be sure to apply heat when he found the result did not follow without it.

On appeal from Wood, V.C., Lord Westbury held that the specification was bad for misdescription. His lordship said: "When it is said that an error in a specification which any workman of ordinary skill and experience would perceive and correct, will not vitiate a patent, it must be understood of errors which appear on the face of the specification, or the drawings it refers to, or which would be at once discovered and corrected in following out the instructions given for any process or manufacture; and the reason is because such errors cannot possibly mislead. But that proposition is not a correct statement of the law, if applied to errors which are discoverable only by further experiment and enquiry."

In the House of Lords the judgment of Lord Westbury was affirmed. Lord Chelmsford, C., said: "There can be no doubt of the meaning of the language used by the patentee. His invention, as he describes it, is the mixing of aniline with dry arsenic acid, for the purpose of producing a rich purple colour, and he adds, 'or I accelerate the operation by heating to, or near to, its boiling-point.' In this description the operation itself is mixing aniline with dry arsenic acid; the addition of heat is described merely as accelerating that operation. There is nothing upon the face of the specification to shew that the invention described is not in every part of it the subject of a patent. But it was proved in evidence, and admitted by the plaintiff, that mixing aniline with dry arsenic acid without the application of heat would produce only a faint colour, quite unfit for dyeing purposes. It was contended, on the part of the appellants, that the word 'or' in the specification ought to be read 'and.' But there is nothing in the terms of the description, nor upon the face of the specification itself, which would justify the Court in thus changing the form of the expression. It was also said that there was a considerable body of evidence to shew that skilled persons, to whom the specification must be taken to be addressed, found no difficulty in working it out, and applied heat in the process as a matter of course. This, however, cannot have any effect upon the construction of the specification. It merely proves that the description, though erroneous, is not likely to mislead skilled workmen. That the description may induce the necessity of

experiments appears from the evidence of an experienced chemist, who says, 'If I found there was no action without heat I should heat it immediately.' The construction of the specification remaining untouched by the evidence, and the Court being informed that the invention which is claimed is incapable of producing the result intended, it had no other course to pursue than to pronounce the patent to be void." (u)

In *Hinks v. the Safety Lighting Company*, (v) where the patent related to the construction of lamp-burners, an objection was taken that the specification was insufficient and the patent bad for ambiguity. Jessel, M.R., held the objection well founded. The Master of the Rolls said: "A second point was taken on the second burner, which was a very small affair indeed, and that was this: the second burner was badly drawn; the drawing did not shew where the air was to get in. . . . It is a little thing, of very little merit; and then comes the question how far I am at liberty to correct the specification. The specification does not tell me where the opening is to let in the air. All it says is, 'A circular hole is made in the cone or deflector, through which the circular flame passes.' It is said that though there is no opening in the drawing, yet a workman could correct the drawing by putting in the opening, and he could correct it because he is told there is a cone or deflector, and the cone or deflector of the lamp means something or other which will deflect air and, therefore, there must be sufficient air to be deflected and support the light and make it burn well. But, unfortunately for that argument, a lamp may burn badly although it is patented, and the patentee said it would burn badly even though the holes were exceedingly small, or, as I understand, if there were no holes at all it would burn, but it would be an imperfect combustion. Why is a workman to know, *à priori*, that every invention will answer? I cannot say that an inventor never made an invention which did not answer. On the contrary, I am quite sure that many inventors have patented inventions that would not answer at all. Now, that being so, I am not prepared to say that when you put your specification into the hands of a skilled workman he is to exercise invention to make a lamp useful, that he is to correct it without being told anything to correct it by. This assumption was made, no doubt, by the very eminent scientific gentleman who gave evidence, *Mr. Bramwell*. Of course he could do it; he would know how to do it, and where to do it, and everything else. The

(u) L. R. 1 H. of L. p. 320.

(v) L. R. 4 C. D. 607; 46 L. J. Ch. 185

other scientific gentleman could not deny that it was possible, but I take it that is not the meaning of the patent laws. When you have such a little trumpery invention as the second, the whole merit of which is very small indeed, if you are to tell people how to do things better, you must tell them in a proper way, without the exercise of any invention or much trouble; and in my opinion this is not within the rule, and is badly specified."

In *Wegmann v. Corcoran*, (w) the patent was for "an improved machine or apparatus for treating or preparing meal." The machine included (i.a.) a pair of "squeezing rolls," which the specification said were to have a surface consisting of material containing so much silica as not to colour the meal or flour. "I prefer," said the patentee in his specification, "to make them of iron coated with china, and finely turned with diamond tools." The defendants alleged that the specification was insufficient. Fry, J., so found, and dismissed the action. On appeal Thesiger and James, L.JJ., affirmed the judgment of the Court below. It appeared from the evidence that the china made in England would not be hard enough for the purpose intended, and that consequently the word "china" as used in England when the specification was taken out, included many materials which would be absolutely useless for the purposes of the invention. Further, the degree of hardness in the china which the invention required was not specified. The turning of china with a diamond tool was unknown in England, and therefore indicated no degree of hardness known in the trade. And there was evidence that soft china could be turned in this way. On this, Fry, J., said: "Therefore, although I come to the conclusion that hard china is pointed out in the specification, it appears to me that the information which the plaintiff himself told us he got for the purpose of his invention from a Professor of Chemistry, (x) viz. that the material must contain 70, or upwards of 70 per cent. of silica, was not indicated to the person who was to act upon the specification, but that he was left to find out as best he could what amount of hardness he must reach before he could be able to use the rolls for the purpose of the invention, and that, as it appears to me, he would not have been able to discover without very considerable investigation and experiment. All that knowledge would have been necessary before the useful invention could be arrived at, and all that ought to have been communicated to the public."

(w) L. R. 13 C. D. 65; 27 W. R. 357. communicated from abroad.

(x) The invention here was one com-

The wording of the specification in this case suggested that iron coated with china was only a preferential mode of making the rolls, and that other materials might be used for that purpose: any material containing so much silica as not to colour the meal or flour. Upon this the learned Judge said: "It is said that the material preferred by the plaintiff is iron coated with china. But, before you can prefer one thing to another you must have several things among which the choice can be made, and if the only thing which, so far as the plaintiff has ascertained, can be shewn to answer the purpose is a particular china roll, and he leads the mind of the reader to infer that there is a whole class of silicated materials which might answer, he has, as it appears to me, been giving a misleading description of his invention. He has indicated that there is a *genus* wider than the *species* which will answer, whereas, in fact, it is only the *species* which will answer the purpose in question. The effect of the description is to lead the mind of the reader to the necessity of making experiments with regard to the other classes of material which are indicated." Referring further to the specification and the class of material indicated by the invention, his lordship said: "In the next place, the specification says that the material must have the hardness for the purpose set forth. That is a thing which, I repeat, as it appears to me, so far as the specification goes, can only be ascertained by experiment, and for this reason, that the process of squeezing meal in this manner by rolls, subject to this sort of operation, is a new invention, and therefore the hardness required is not known. It is not shewn by reference to any standard, and yet amount is an essential piece of knowledge before a person can satisfactorily make these rolls without further experiment. In my judgment, any china manufacturer who was instructed to make these rolls would fail to do so until the roll had been employed in the squeezing operation in a mill, and found to be either hard enough or not hard enough."

"The specification," said Smith, J., summing up the law on this subject in *Lane Fox v. Kensington Electric Company*, (y) "may call upon a workman to exercise all the actual existing knowledge common to the trade; but it must not call upon him to exercise his ingenuity or invention; (z) nor cast upon the public the expense and labour of experiment and trial; (a) and, to use

(y) 9 R. P. C. 247.

(z) *Morgan v. Seaward*, 2 M. & W. 544
(per Alderson, B.).

(a) *R. v. Wheeler*, 2 B. & Ald. 345;

Macnamara v. Hulse, 2 C. & M. 471;
Stevens v. Keating, 2 Ex. 772.

the words of Sir George Jessel in *Plimpton v. Malcolmson*, (b) taken from those of Alderson, B., it must not take the form of a problem."

Trivial Mistakes or Omissions will not be Fatal to the Patent.— While a specification is bad if it puts the public to the labour and uncertainty of further invention through the medium of experiments, trivial mistakes or omissions which a workman of ordinary skill would correct with little trouble will not avoid a patent otherwise valid.

In *Plimpton v. Malcolmson*, (c) Jessel, M.R., discussing what the specification ought to tell the public, said: "First of all, it ought to tell the workman how to do it; but it need not tell him every detail. Mr. Baron Alderson says this: (d) 'Now, a workman of ordinary skill, when called to put two things together, so that they should move, would, of course, by the ordinary knowledge and skill he possesses, make them of sufficient size to move. There he would have to bring to his assistance his knowledge that the size of the parts is material to the working of the machine. That is within the ordinary knowledge of every workman. He says, "I see this will not work because it is too small," and then he makes it a little larger, and finds it will work. What is required is, that the specification should be such as to enable a workman of ordinary skill to make the machine; with respect to that, therefore, I do not apprehend you will feel any difficulty.' Therefore he does not mean that the man is to shut his eyes, and copy what he sees before him; but he is to do it in an intelligent manner, and when he has made it according to the specification, and sees it will not work, and sees by the ordinary knowledge of his trade what is to be done to make it work, he is to make it work; and if the specification does not mislead, and contains enough to enable the man to do that, then it is sufficient. The other cases upon the subject are numerous. It is sufficient to say that, in my opinion, they do not conflict with what Mr. Baron Alderson lays down in *Morgan v. Seaward*."

In the earlier case of *Wallington v. Dale*, (e) the patent was for improvements in the manufacture of gelatinous substances and in the apparatus to be used therein. The improvements consisted in a process which rendered the employment of blood for purifying the gelatine unnecessary. The invention claimed

(b) L. R. 3 C. D. 531; 45 L. J. Ch. p. 514.
505.

(d) 1 W. P. C. 176.

(c) L. R. 3 C. D. p. 570; 45 L. J. Ch.

(e) 23 L. J. Ex. 49; 7 Ex. 888.

consisted in cutting the hides into shavings, thin slices, or films. The specification did not state whether they were to be cut wet or dry, or to what degree of thinness, or what was the minimum of heat they ought to be subjected to in the subsequent processes. It was proved that they might be cut either wet or dry, and that the thinner they were cut the better, if the fibrine texture was preserved, and that the most satisfactory result would be obtained if no more heat was used than would dissolve the gelatine in the shortest period. The specification was held sufficient.

In *Otto v. Linford*, (*f*) objection was taken to the plaintiff's patent on account of certain mistakes and omissions which were said to prevent the successful performance of the invention by any one following the specification. The mistakes relied on were in the drawings, but were such as a workman could easily correct.

Jessel, M.R., said: "The objection in this case is an allegation, or series of allegations, as to omissions, and a series of allegations as to mistakes in the drawings. They are both classes of objection which are quite familiar to those who have had to do with patent cases, and are always remarkable in this way, that they are never found out until the action is brought. The workman always makes the machine, and the machines are made in hundreds or in thousands, and nobody has found them out. But when you come to study the specification, and then to study the machine, you find them out. Many years ago I was counsel in a case which is not reported, but which is a very good illustration, for all that. I was counsel for some makers of a threshing machine, and a very clever threshing machine it was, and they sold thousands of them. The beaters of a threshing machine are both cut across, and they should be set opposite to one another, otherwise they will not thresh grain at all; but the stupid draughtsman, by some mistake, had put them all parallel, so that, if the machine had been made according to the drawing, it would not have threshed anything. Nobody found that out until we came into court; and Ransome & Co. had made the machines with the beaters set crosswise. Well, when it came to be discussed, the thing was too absurd; it would not have been a threshing machine at all, and, of course, the drawing was corrected by the letterpress, which told them that the thing would thresh. In these matters, therefore, it is not for us to find out how not to do it; but the workman, when he finds that the drawing does not work exactly, sets himself at once to see how

(*f*) 3 L. T. (N. S.), 35.

it ought to be done, and, in practice, the thing never arises at all."

In the case just mentioned the patentee's discovery was a means of regulating the explosions which supplied the motive power in a gas-motor machine, by the introduction of a cushion of air into the cylinder between the piston and the combustible mixture. The specification did not state what proportion of air was required to be introduced into the cylinder for this purpose, and an objection was raised that this omission was fatal to the patent. The Court, however, was of opinion that the omission was one easily remedied by the exercise of care, a matter of regulation rather than experiment, and did not avoid the grant. Jessel, M.R., said: "If a man is left without any more information, he asks, 'How much air am I to let in?' He lets in a little air, and he finds that the thing explodes as before; and he lets in some more, and he finds directly, on the mere regulation of his stop-cock, how much is required; and he finds very soon that he has let in enough, and now there is a gradual expansion, and no longer a sudden and explosive expansion. It does not appear to me that that requires invention. It requires a little care and watching, that is all. If a man told you to mix a glass of brandy and water, and to use brown brandy, and that you were to mix it till it was pale yellow, the exact quantity need not be told to you. You would soon find out when it was pale yellow. That is the object to be achieved. Nobody would say it required invention, and that is what this man tells you. But he does tell a great deal more. When you come to look at his specification he has drawings, and his drawings, with the letterpress, shew that he really does put in nearly as much air as explosive mixture. It seems to me that there is sufficient in this specification to tell the maker of the engine and the user of the engine, without requiring him to use an inventive faculty, how to make the engine, and in what proportion it will be necessary for the air to be let in—not definite proportions—but proportions, as far as proportions are wanted, to make the machine workable."

In the case of the *British Dynamite Company v. Krebs*, (g) the sufficiency of the specification was much discussed. There the patent was for "improvements in explosive compounds, and the means of igniting the same." The specification stated that the invention related to the use of nitro-glycerine in an altered condition, which was more practical and safe in use. It set out

(g) 13 R. P. C. 190; Goodeve, P. C. 88.

that this altered condition was effected by causing the nitro-glycerine to be absorbed in porous unexplosive substances, such as charcoal, silica, paper, or similar materials, whereby it was converted into a powder, which the patentee called dynamite or Nobel's safety powder. In this form nitro-glycerine acquired the property, when absorbed, of being in a high degree insensible to shocks, and could be burnt on a fire without exploding. After setting out three modes of firing the powder, the patentee's claim was as follows: "I claim, as the invention secured to me by letters patent as aforesaid, the mode herein set forth of manufacturing the safety powder or dynamite herein described, and also the modes of firing the same by special ignition as herein set forth."

At the trial before Fry, J., it was proved that a silicious earth found in Germany, and known as Keiselguhr, would absorb the liquid nitro-glycerine far better than any other substance, and yet retain its condition of powder. This earth was first calcined, and then reduced to powder, after which it formed the principal ingredient used in the manufacture of dynamite. It was further proved that dynamite had been made from the specification of the patentee by workmen of ordinary skill by using slate and brick-dust as the absorbing medium. Fry, J., held the patent good, and gave judgment for the plaintiffs. On appeal, his judgment was reversed by Jessel, M.R., and James and Thesiger, LL.JJ., who held the specification insufficient. Referring to the use of German silicious earth, the M.R. said: "This is a new material, and a new invention altogether, and an ordinary workman could only correct it by experiment, and that is not the meaning of a patent." James, L.J., said the patentee had not given in his specification a sufficient direction as to how to take up that quantity of the nitro-glycerine which would be at once practically explosive and yet safe; and that the references to paper and silica were misleading, in that from these substances a practical commercial article could not be made.

The House of Lords reversed the Court of Appeal, and restored the judgment of Fry, J. Earl Cairns, C., referring to the specification said: "But then it is said that there is no sufficient description of the manner in which the invention is to be performed. You are not told, it is said, what quantity of the liquid is to be absorbed. You are not told whether the various absorbing substances will absorb equal or unequal quantities of the liquid. You are not told what quantity is the best to use, either of the liquid or of the absorbing substance. You are not told to what extent

the pulverization is to be carried. With regard to these objections I should be disposed to say, even were there no evidence in the case, that they did not appear to me to be objections, the force of which I should be prepared to admit. When you speak of a porous substance absorbing a fluid, if the porous substance is in one piece, you naturally expect that the absorption will continue up to the point when the porous substance can hold no more; and when the porous substance is to continue a powder, the act of absorption itself will shew the point at which the absorption must stop, lest the absorbing substance should become, not a powder, but a paste. So also as regards the choice of the porous substance. Ordinary knowledge of the properties of the substance will shew what substance will pulverize most conveniently, and what substance will absorb best." His lordship then cited the evidence shewing that workmen of ordinary skill had made the article by following the specification, and proceeded: "The scientific witnesses called by the appellants speak to the sufficiency, in their opinion, of the directions in the specification; but what is more material is that I find no workman whatever, skilled or unskilled, produced on the part of the respondents, who states that he has been, or would be, misled by the specification, or unable to make dynamite by following its directions. I therefore come to the conclusion that there is no insufficiency in the specification."

Difference between Experiment and Practice.—A patent is bad if the specification is so framed as to put the public upon experiment in carrying out any part of the directions essential to performing the invention. It is, however, often a question of considerable nicety to decide whether or not the omissions in a specification are only such as a workman acquainted with the existing knowledge of the subject-matter can supply, or such as must put upon the workman the labour and uncertainty of independent experiment. Defendants in actions of infringement frequently resort to the device of calling experts, who say they have tried to make the plaintiff's invention from his specification, and failed. Where the performance of the invention involves operations of great delicacy, the Court views this kind of evidence with suspicion; for the rule that the public must not be left to experiment does not mean that they must be able to perform the invention on the first trial and without practice.

This distinction between experiment which vitiates a patent and practice which does not, was laid down by the Court of Appeal

in *Edison v. Holland*. (h) In that case, Lindley, L.J., said: "The defendants contend that no competent workman could have made carbon filaments according to the specification without further instructions than are given. If it be meant that few competent workmen could make them without some practice, I think the contention is well founded; but this is not sufficient to invalidate the patent. If a person is told to carbonize a thread, and, for want of thought or practice, he takes a porous crucible for the purpose, and does not protect his thread, and fails, when, if he had packed this crucible, or had taken a non-porous crucible, he would have succeeded, his failure can hardly be said to be the fault of his instructor, if a little thought and consideration would have shewn that a packed crucible or a non-porous crucible was the right one to employ. The fact that a workman may use a wrong tool when he has a right one, which a little thought will lead him to see ought to be used, does not warrant the inference that a specification is bad if it does not tell him which tool to use. . . . I feel the great difficulty of describing in words the distinction between an amount of practice without which failure is probable, but the necessity for which does not destroy a patent, and an amount of experiment and invention without which failure is certain, and the necessity for which destroys a patent. The test, however, by which to decide such a question is, I think, to be found by asking whether anything new has to be found out by a person of reasonably competent skill, in order to succeed, if he follows the directions contained in the specification. If yes, the patent is bad; if no, it is good so far as this point is concerned. . . . It is settled that a patentee who does not disclose the best method known to him of carrying out his invention, does not comply with the second of the conditions to which I have before referred. But if a patentee says that something must be done which a reasonably competent man would know how to do, the patentee need not tell him how to do it, nor warn him to be careful and to exercise such forethought and attention as the delicacy of the process to be used, or the material to be employed, plainly demand."

In *Badische Anilin und Soda Fabrik Company v. Levinstein*, (i) the patent was for improvements in the production of colouring matters suitable for dyeing and printing. The specification mentioned four processes, all producing red and brown colouring matter, but matter of varying shades. It was objected that the

(h) 6 R. P. C. 282.

(i) 12 App. Ca. 710; 4 R. P. C. 449.

public were left to experiment to ascertain which process produced which shade. On this Lord Herschell said: "It was urged by the learned counsel for the respondents that a patentee is bound to disclose the means by which his invention may be carried into effect; and that if he leaves this to be ascertained by experiments, his patent cannot be supported. This is no doubt correct. But I think the patent under consideration does shew how the colouring matters are to be produced, and that what it leaves a skilled person, of the class to whom the specification is addressed, to discover is only which of these colouring matters will answer his purpose at any particular time. There is, in my opinion, no warrant for asserting that this invalidates the patent. I may add that the evidence satisfies me, that when once the desired shade is obtained, there would be no practical difficulty in repeating the process with a reasonable certainty of producing the same result." (*j*)

To Whom the Specification Speaks.

Specifications are Addressed to Workmen of Ordinary Skill in the Subject-matter.—The object of requiring a patentee to describe his invention, and the manner of performing it, is that the public may at the end of the patent term have the use of it. The description given by the patentee in his complete specification must therefore be sufficiently clear and distinct to enable the public to put the invention in practice by following the directions therein contained. By the "public," in such case, is meant not the general public, but persons conversant with the subject-matter of the invention.

In *Arkwright v. Nightingale*, (*k*) Lord Loughborough said: "The clearness of the specification must be according to the subject-matter of it; it is addressed to persons in the profession having skill in the subject, not to men of ignorance; and if it is understood by those whose business leads them to be conversant in such subjects, it is intelligible."

In *Harmar v. Plane*, (*l*) Lord Ellenborough, C.J., said: "When Lord Mansfield said (in the case of *Liardet v. Johnson*) (*m*) that the meaning of the specification was, that others might be taught to do the thing for which the patent was granted, it must be understood to enable persons of reasonably competent skill in such

(*j*) 12 App. Ca. p. 720.

(*k*) 1 W. P. C., p. 61; Dav. P. C. 55.

(*l*) Dav. P. C. 318.

(*m*) Bull N. P. 76; 1 W. P. C. 53.

matters to make it; for no sort of specification would properly enable a ploughman, utterly ignorant of the whole art, to make a watch."

In *Elliott v. Aston*, (n) where the patent was for an invention for the manufacture of buttons, Coltman, J., thus directed the jury on the question of the specification: "The second point is whether the plaintiff has given such a description in his specification as would enable a workman of competent skill (it would not enable me, of course, to make anything of the sort, or any person who is not a person of skill conversant with the trade) to carry the invention into effect."

So, too, in *Otto v. Linford*, (o) Jessel, M.R., said: "The first thing to be remembered in specifications of patents is that they are addressed to those who know something about the matter. A specification for improvements in gas-motor engines is addressed to gas-motor engine makers and workers, not to the public outside. Consequently you do not require the same amount of minute information that you would in the case of a totally new invention, applicable to a totally new kind of manufacture."

Not Addressed to Workmen of Exceptional Skill.—The specification must be construed as speaking, however, to a workman of ordinary, not exceptional skill in the subject-matter. This was clearly laid down by the Court in *Neilson v. Harford*. (p) "It is to be a person only of ordinary skill and ordinary knowledge," said Parke, B. "You are not to ask yourselves the question whether persons of great skill—a first-rate engineer or a second-class engineer—whether they would do it; because generally those persons are men of great science and philosophical knowledge, and they would upon a mere hint in the specification probably invent a machine which should answer the purpose extremely well; but that is not the description of persons to whom this specification may be supposed to be addressed—it is supposed to be addressed to a practical workman, who brings the ordinary degree of knowledge and the ordinary degree of capacity to the subject; and if such a person would construct an apparatus that would answer some beneficial purpose, whatever its shape was, according to the terms of this specification, then I think that this specification is good, and the patent may be supported so far as relates to that."

Again, in *Beard v. Egerton*, (q) Wilde, C.J., said: "If the

(n) 1 W. P. C. 224.

(o) 46 L. T. (N. S.), p. 38.

(p) 1 W. P. C. 295.

(q) 8 C. B. 216; 19 L. J. C. P. 86.

specification be sufficiently plain to be understood by an operator of fair intelligence that is enough."

In the course of the argument in *Neilson v. Harford*, (r) Lord Abinger, C.B., said: "Where the specification uses scientific terms which are not understood except by persons acquainted with the nature of the business, the specification is not bad because an ordinary man does not understand it, provided a scientific man does; but where the specification does not make use of technical terms, where it uses common language, and where it states that by which a common man may be misled, though a scientific man would not; where it does not profess to use scientific terms, and an ordinary man reading the specification is misled by it, it would not be good."

In *Plimpton v. Malcolmson*, (s) this subject was very fully considered. Jessel, M.R., said: "In the first place, it is plain that the specification of a patent is not addressed to people who are ignorant of the subject-matter. It is addressed to people who know something about it. If it is a mechanical invention, as this is, you have first of all scientific mechanics of the first class, eminent engineers; then you have scientific mechanics of the second class, managers of great manufactories, great employers of labour, persons who have studied mechanics—not to the same extent as the first class, the scientific engineers, but still to a great extent—for the purpose of conducting manufactories of complicated and unusual machines, and who therefore must have made the subject a matter of very considerable study; and in this class I should include foremen, being men of superior intelligence, who, like their masters, would be capable of invention, and like the scientific engineers would be able to find out what was meant even from slight hints, and still more from imperfect descriptions, and would be able to supplement, so as to succeed even from a defective description, and even more than that, would be able to correct an erroneous description. That is what I would say of the two first classes, which I will call the scientific classes. The other class consists of the ordinary workman, using that amount of skill and intelligence which is fairly to be expected from him—not a careless man, but a careful man, though not possessing that great scientific knowledge or power of invention which would enable him by himself, unaided, to supplement a defective description, or correct an erroneous description. Now,

(r) 1 W. P. C. 341. See, also, *Crompton, J.*, in *Betts v. Menzies*, 27 L. J. Q. B. 156.

(s) L. R. 3 C. D. pp. 568, 569, 570; 45 L. J. Ch. pp. 513, 514.

as I understand, to be a good specification it must be intelligible to the third class I have mentioned, and that is the result of the law. It will be a bad specification if the first two classes only understand it, and if the third class do not. I do not think, when the cases come to be examined, there is really any difference between the judges on this point. Their language differs, but I do not think the cases differ. I will refer to the case of *Morgan v. Seaward*, (t) where I think it is put by Mr. Baron Alderson as well as it is put anywhere, if I may say so: 'It'—that means the specification—'ought to be framed so as not to call upon a person to have recourse to more than those ordinary means of knowledge (not invention) which a workman of competent skill in his art and trade may be presumed to have. You may call upon him to exercise all the actual existing knowledge common to the trade, but you cannot call upon him to exercise anything more. You have no right to call upon him to tax his ingenuity or invention.' Of course that is open to the observation that the meaning of the word 'invention' may differ to different minds, and it is sometimes impossible to draw the line between perception and invention. We had an instance of that in the present case. One man may see from a drawing that which ninety-nine men out of a hundred cannot see. The witness *Mr. Hulse* stated he had a peculiar faculty for seeing from a drawing things other people did not see, and he likened it to the man who could read music at sight—could read a piece of music he had never seen before, as compared to the ordinary mortal who enjoys no such privilege. But, again, as I said before, some people might have said that what he thinks is perception is invention. In fact, he describes it as intuitive perception, a peculiar power. Many people would call that the power of supplementing by invention what the drawing disclosed to ordinary persons. It is quite impossible to say without considering the concrete, that is, without looking at the subject-matter in respect of which you have to decide—it is quite impossible to say in the abstract what is invention and what is perception. It is, therefore, I think, to be decided by the jury, under the direction of a judge; or if there is no jury, by the judge alone, what, having regard to the subject-matter, is an invention or an exercise of perception."

In *Lister v. Norton*, (u) Chitty, J., said: "The persons to whom a specification is particularly addressed are those who are conversant with the business to which the invention relates. The

(t) 1 Web. 174.

(u) 3 R. P. C. 203.

specification is sufficient if a person of ordinary skill and intelligence in the business can understand the directions, and work upon them without experiments."

In the *British Dynamite Company v. Krebs*, (v) Lord Cairns, C., said: "When the nature of the invention is thus ascertained by the Court as a matter of construction, the Court has then to enquire whether the manner in which the same is to be performed is sufficiently described in the specification to the comprehension of any workman of ordinary skill in the particular art or manufacture, and this the Court can best do by the evidence of workmen of that description, and by the evidence of what workmen of that description have actually done under the patent."

Workmen Presumed to be Informed as to Existing Knowledge.—The specification is to be construed not only with reference to a particular class of persons to whom it is addressed, but also with reference to the existing state of knowledge in that class at the time when the patent was granted. (w) Thus, the patentee may assume that all the information which at the time is common knowledge in the art or science to which his invention relates is known to the persons to whom his specification is directly addressed; and he is not required to burden his specification with such details as a workman of ordinary skill would be able to supply without special directions. (x) Where a sketch will place such person in possession of the invention, the inventor need not elaborate all the details of a finished picture.

In *Morgan v. Seaward*, (y) Alderson, B., said that in following the directions for performing an invention contained in a specification the workman may be called upon to exercise all the actual existing knowledge common to the trade.

This rule was recognized by the Court in *Foxwell v. Bostock*. (z) "It was contended by the plaintiff's counsel," said Lord Westbury, "that a specification ought to be read by the light of the knowledge existing at the time. If, for example, some law of nature, or some fact in science be discovered and made publicly known, the specification of a patent subsequently granted may assume that such natural law or scientific fact is known to the reader, and it need not be stated or explained. Thus, to put a familiar

(v) 13 R. P. C. 190.

(w) *Foxwell v. Bostock*, 10 L. T. (N. S.), 148; *Badische v. Levinstein*, 12 App. Ca. 710.

(x) *Gaulard & Gibb's Patent*, 6 R. P. C.

225 (per Lindley, L.J.).

(y) 1 W. P. C. p. 174.

(z) 10 L. T. (N. S.), 148; 4 De G. J. & S. 298, p. 313.

instance, if after the law of gravitation had been discovered and made known a specification had stated or assumed certain results as being the consequences of that law, but without mentioning or referring to that cause, such specification would not have been insufficient or obscure. So the specification of a patent for a chemical discovery may be so worded as to assume a knowledge of the existing and known state of the science, provided it gives a clear description of the alleged new discovery, that is, of the addition which it professes to make to the existing knowledge. In such cases it will still be the fact that the invention will appear from the specification."

In *Badische Anilin und Soda Fabrik Company v. Levinstein*, (a) it appeared that one of the ingredients in the plaintiffs' process was a substance called naphthylamine. It was objected that the word was misleading as not distinguishing whether beta or alpha naphthylamine was intended. But it was shewn that although beta naphthylamine was discovered in 1875, yet it was not generally known as naphthylamine in 1878, the date of the patent; and that any dealer in the substance would in 1878 have understood by naphthylamine the older or alpha form. On these facts the House of Lords held that the specification, properly construed with reference to the standpoint of public knowledge at the time it was filed, was not misleading.

Lord Herschell said: "The objection is that whilst the specification throughout speaks simply of naphthylamine without any prefix, there were, at the date of the patent, two known isomers called alpha and beta naphthylamine, and that the specification is, on this account, ambiguous. In weighing the objection it is necessary to bear in mind the facts relating to these two isomers. Alpha naphthylamine had been well known for at least fifteen years prior to the patent. Beta naphthylamine was first discovered in 1875, and down to 1878 was only known by the record of laboratory experiments, and had not become an article of manufacture. Until after the discovery of beta naphthylamine, alpha naphthylamine was described simply as 'naphthylamine.' I will not go into the details of the evidence on this point, but will state the conclusions I draw from it. I am satisfied that after 1875, and down to the time of the patent, alpha naphthylamine was still sometimes spoken of as 'naphthylamine,' and that if any one had ordered 'naphthylamine' of a manufacturer, he would, without hesitation, have supplied alpha naphthylamine. Under these

(a) 12 App. Ca. 710; 4 R. P. C. 449.

circumstances, I entertain no doubt that any reader of the specification would understand by the word 'naphthylamine' occurring in it, the known commercial article, which until recently, at all events, had always borne that name, and not beta naphthylamine, to which the term 'naphthylamine' alone had never been applied. I am therefore of opinion that the specification is not, in this respect, open to the charge of ambiguity." (b)

(b) 12 App. Ca. p. 723; 4 B. P. C. p. 468.

CHAPTER XI.

CLAIMS IN SPECIFICATIONS.

Origin and Function of Claims in a Specification.—It has long been the custom for patentees to conclude their specifications by appending in one or more clauses a concise statement of the invention for which they claim protection. These concluding clauses were originally introduced by inventors as a matter of convenience to themselves, in order to rebut the inference which might otherwise be drawn, that everything which it had been found necessary to describe in setting forth the manner of performing the invention was claimed by the patentee.

“The purpose of claims,” said Kay, J., in *Rowcliffe v. Longford*, (a) “is to shew how much of that which is described, or how little, is intended to be the subject of the patent, and to disclaim all which is not included in the claims which follow. And for this obvious reason, that in describing an apparatus so that a workman can construct it, you constantly have to include in your description, in order to make it intelligible, a great many things which you do not mean to include in your claim for a patent, and it is essential, in order to make the description intelligible to the workman who comes afterwards, when the patent has expired, and who expects to find there all directions for constructing the apparatus, to make it more large than the mere statement of that in which the essence of the invention consists. Accordingly, when you come to the claim, what the patentee says in his claim is, “Now, mind, I have written out this description for the workman who comes after to read it, to enable him to make the apparatus; but what I mean to claim is, not the whole of that, but only this which I now proceed to describe.”

Claiming clauses, thus first introduced by private initiative for the convenience and protection of the patentee, remained optional

(a) 4 R. P. C. 287.

under the Patent Law Amendment Act, 1852, (b) but are now, under the Patents Act, 1883, a necessary part of every complete specification. Sub-section 5 of Section 5 of that Act provides that "a complete specification must end with a distinct statement of the invention claimed."

It has been decided, however, that this provision is directory only, and that therefore, where the Comptroller-General passes a specification which does not obey in this respect the direction of the Act, the Courts will not hold the patent void by reason of such non-compliance with the Statute. (c)

Perhaps the best definition of a claim is that found in the "luminous exposition" (d) of Lord Cottenham in *Kay v. Marshall*. (e) "What follows is merely the claim, not intended to be any description of the means by which the invention is to be performed, but introduced for the security of the patentee, that he may not be supposed to claim more than he can support as an invention. It is introduced lest in describing and ascertaining the nature of his invention, and by what means the same is to be performed (particularly in the case of a patent for an improvement), the patentee should have inadvertently described something which is not new, in order to render his description of the improvement intelligible. The claim is not intended to aid the description, but to ascertain the extent of what is claimed as new."

"The office of a claim," said Lord Chelmsford in *Harrison v. the Anderston Foundry Company*, (f) "is to define and limit with precision what it is that is claimed to have been invented and therefore patented."

In *Plimpton v. Spiller*, (g) a case prior to the Patents Act, 1883, James, L.J., in the Court of Appeal said: "Now, it is important to bear in mind that there is nothing in the Act or in the patent law which says anything about claims. A patentee gets a patent for his invention, and he is obliged to specify that invention in such a way as to shew to the public not only the mode of giving practical effect to that invention, but what the limits of the invention are for which his patent is taken out; and the real object of what is

(b) *Lister v. Leather*, 27 L. J. Q. B. 295; 8 E. & B. 1033; *Dudgeon v. Thompson*, 30 L. T. (N. S.), 244; *Plimpton v. Spiller*, L. R. 6 C. D. 426.

(c) Per Lord Halsbury, C., in *Vickers v. Siddell*, 7 R. P. C. p. 30; 15 App. Ca. p. 500.

(d) Per Jessel, M.R., in *Plimpton v. Malcolmson*, L. R. 3 C. D. 563; 45 L. J.

Ch. 511.

(e) 2 W. P. C. p. 39; 1 My. and Cr. 383.

(f) 1 App. Ca. p. 579; 47 L. J. Ch. 211.

(g) L. R. 6 C. D. p. 426; 47 L. J. Ch. 213; see also *Edison-Bell Phonograph Co. v. Smith*, 11 R. P. C. pp. 401, 405.

called a claim, which is now much more commonly put in than it used to be formerly, is not to claim anything which is not mentioned in the specification, but to disclaim something. A man who has invented something gives in detail the whole of the machine in his specification. In doing that he is of necessity very frequently obliged to give details of things which are perfectly known and in common use—he describes new combinations of old things to produce a new result, or something of that kind. Therefore, having described his invention, and the mode of carrying that invention into effect, by way of security he says: ‘But take notice, I do not claim the whole of that machine, I do not claim the whole of that *modus operandi*, but that which is new; and that which I claim is that which I am now about to state.’ That really is the legitimate object of a claim, and you must always construe a claim with reference to the whole context of a specification.”

So, too, in *Jackson v. Wolstenhulmes*, (h) Cotton, L.J., said: “The object of a claim is this, to restrict and cut down what might be suggested as the claim made by the previous part of the description, so as to shew what it does consist of, and prevent the patent from being defeated in consequence of words being used which might lead to the inference that something which was not intended to be claimed was claimed, and thus the patent being defeated by there being included in the previous part of the specification that which was not new but old.”

In the same case, Bowen, L.J., said: “I am of the same opinion, on the short ground that the fitting and turning is not really treated as part of the invention, nor is it claimed. It is mentioned in the previous part of the specification, but when we come to the claim at the end, the claim omits it. It must be remembered that claims are for the security of the patentees, to prevent it being said that the patentee has claimed more than can be really supported as his invention. Here the patentee has abstained from claiming the fitting and turning.”

Under the Patents Act, 1883, however, a claim is more than a disclaimer, for nothing that is not claimed is now considered to be patented. (i)

In *Siddell v. Vickers*, (j) the office of a claim under the Act of 1883 was discussed at length in the Court of Appeal. Cotton, L.J., said: “Before this Act there was no necessity in any case for a claim. A claim was very useful, in order to prevent it being

(h) 1 R. P. O. 105.

(i) See Lord Herschell in *Parkinson*

v. *Simon*, 12 R. P. O. p. 406.

(j) 5 R. P. O. 416; L. R. 39 C. D. 92.

contended that in the way the specification described the invention there was a claim to protect that which was old, and very frequently the object of a claim was rather to disclaim—"I do not claim so and so, but what I do claim is so and so. I do claim the whole combination. I do not claim the particular parts which are old." Or it may be that a man would claim the whole combination; and also he would say that 'I claim so and so as being my invention.' Of course, if he did not particularize what he claimed, and there was something in the description of his invention which apparently he claimed, and which could be shewn to be old, that might vitiate the patent; but here, for the first time in this Statute, there is a requirement that there should be a statement of what the patentee claims. I understand 'distinct' to mean independently of and distinct from the mere description of the nature of his invention, and of the way in which it is to be carried into effect. He must state what he claims and what he does not claim."

A Distinct Statement of the Invention Claimed.—The Court of Appeal were divided in the above case as to the meaning of the words, a "distinct statement of the invention claimed;" Cotton, L.J., being of opinion that "distinct" referred only to the position of the claim as a separate paragraph, while Fry and Lopes, L.JJ., considered it to further imply distinctness in intelligibility as considered apart from the body of the specification—a quality lacking in the claim then before the Court.

After referring to the language of the Act, Fry, L.J., said, "It appears to me the intention of the Legislature is reasonably plain from the words I have read, but I think they are illustrated by the form that is given in the schedule to the Act, and which, having stated a given form for the statement of the invention, proceeds to conclude in this way: 'Having now particularly described and ascertained the nature of my invention, and in what manner the same is to be performed, I declare that what I claim is, 1, 2, 3, etc.; and the marginal direction is, "Here state distinctly the features of the novelty claimed."' Now I turn to this specification, and I find that it concludes in this manner: 'Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I here declare that I do not limit myself to the precise details of my invention as hereinbefore specified, and as illustrated on the accompanying drawings, because equivalent modifications or variations can be made in such details and quite consistent with the principles or characteristic features of my invention.' I pause here to observe that the

author of this specification knows the distinction between the principles and characteristic features of his invention and those details which are not essential. It occurs to me that those are the very things he ought to have explained to us in his claim. He ought to have told us in his claim succinctly and distinctly what were the principles and characteristic features of his invention. But instead of that he tells the reader that there are such features and that there are such principles, but leaves him to find them out from reading the whole specification. The specification proceeds: 'And in conclusion I declare that what I claim is, the general construction, adaptation, or application, and the combination and use of the several parts, in the whole constituting improved, more simple and efficient appliances or means for working or operating on iron or steel forgings, substantially as hereinbefore set forth, and as illustrated on the accompanying drawings.' Observe, the effect of that is to throw you back by reference to the whole that has gone before, with the additional difficulty created by a direction to distinguish that which is the substance from that which is not the substance. Now, in my view, that is not a distinct statement. It is not in any proper sense a distinct statement of the invention claimed, because, as I have already said, you are thrown back upon the whole of the specification." (*k*)

Commenting on the same point, Lopes, L.J., said: "With regard to the objection that the complete specification does not end with a distinct statement of the invention claimed, I agree with Fry, L.J. I think that a distinct statement must mean something more than a separate paragraph. I think that the Legislature contemplated a distinct summary of the main features of the invention, something to which the reader might readily refer, and learn therefrom, without referring to the body of the invention, what the characteristic features of the invention claimed were. Applying this to the present case, the statement of claim here seems to me to be loose, rendering it necessary for the reader, in order to ascertain the characteristic feature of the invention, to refer to the body of the specification." (*l*)

The decision of the Court of Appeal was affirmed in the House of Lords, but no opinion was expressed by the House as to whether the specification ended with a distinct statement of the invention claimed, within the meaning of the Act. Lord Herschell, however, said that he would certainly not recommend it as an example to be followed. (*m*)

(*k*) 5 R. P. C. p. 432.

(*l*) Ibid.

(*m*) 7 R. P. C. 292, p. 306.

Claim where the Invention is an Improvement.—Where the patent is for an improvement in some known machine or process, the inventor must limit the claim in his specification to that improvement only, and clearly indicate wherein that improvement, as distinguished from the rest of the machine, consists. (n)

Referring to this in *Parke v. Stevens*, (o) Sir W. M. James said: “It is obvious that a patentee does not comply as he ought to do, with the condition of his grant, if the improvement is only to be found, like a piece of gold, mixed up with a great quantity of alloy, and if a person desiring to find out what was new and what was claimed as new, would have to get rid of a large portion of the specification by eliminating from it all that was old and commonplace, all that was the subject of other patents or of other improvements, bringing to the subject, not only the knowledge of an ordinary skilled artisan, but that of a patent lawyer or agent. For example, supposing that a compensation pendulum was now for the first time invented, it would not do to patent improvements in clocks in general terms, and give a specification of the whole machinery of a clock, introducing somewhere in the course of the description the mode of making a compensation pendulum, and then end by claiming the arrangement and the combination aforesaid. He must say expressly, ‘I claim the invention of a compensation pendulum, and I make it thus.’” (p)

Claim for a New Combination of Old Materials.—Where the invention is a new combination of old materials, the combination is, *ex necessitate*, the novelty, and a general claim for such a combination will be good.

It was at one time supposed that the case of *Foxwell v. Bostock* (q) had laid down a different rule, and it was argued, on the authority of that case, in *Harrison v. the Anderston Foundry Company*, (r) that a general claim to a new combination could not be sustained without a further specification of the novelty.

In *Foxwell v. Bostock*, however, the invention consisted not in a new combination as such, but in an improvement in a known mechanism, viz., the disposition of three cams upon one shaft in a sewing-machine; and the vice of the specification in that case lay in the fact that the patentee, instead of claiming only his

(n) *Kynoch & Co. v. Webb*, 17 R. P. C. 100; see pp. 107, 115.

(o) L. R. 8 Eq. p. 365; 38 L. J. Ch. p. 630.

(p) See, also, *Murray v. Clayton*, L. R. 7 Ch. 586.

(q) 4 De G. J. & S. 298; 10 L. T. (N. S.), 144.

(r) L. R. 1 App. Ca. 574. See these cases considered by the House of Lords in *Kynoch & Co. v. Webb*, 17 R. P. C. 100.

improvement, claimed the whole machine of which the improvement was only an incorporated part. The claim, after amendment, read as follows: "The combination and arrangement of the various parts of machinery for sewing or stitching with the use of a needle and shuttle."

In *Harrison v. the Anderston Foundry Company*, (s) the plaintiff's patent was for "improvements in loom-weaving." The patentees claimed generally, as a compound whole, the construction and arrangement of the parts of the mechanism described in the specification. The Court of Session in Scotland, yielding to the argument founded on the alleged meaning of Lord Westbury's judgment in *Foxwell v. Bostock*, held this claim bad on the face of it, as not telling the public what was new, and what disclaimed by the patentees. On appeal the House of Lords reversed this decision. Lord Hatherley, commenting on *Foxwell v. Bostock*, said: "It was there held—and that, I think, was all that was held—that it is not competent to a man to take a well-known existing machine, and having made some small improvement, place that before the public and say: 'I have made a better machine. There is the sewing machine invented by So-and-so; I have improved upon that. That is mine; it is a much better machine than his.' That will not do; you must state clearly and distinctly what it is in which you say you have made an improvement. To use an illustration which was adopted, I think by Lord Justice James, in another case, (t) it will not do, if you have invented the gridiron pendulum, to say, 'I have invented a better clock than anybody else,' not telling the public what you have done to make it better than any other clock which is known.

"That principle was laid down in *Foxwell v. Bostock*, and I do not think that anything further was intended to be determined in that case. It could not have been meant in that case to say that where that happens, which may well happen, that a person, arranging his machinery in a totally different way from the way in which it has ever been before arranged, although every single particle of that machinery is a well-known implement, produces an improved effect by his new arrangement, that new arrangement cannot be the subject of a patent. It may be that the levers may be perfectly well known in their mode of action, and it may be that all the other separate portions of the machinery to which the patent relates may be perfectly well known; but if he says, 'I take all

(s) L. R. 1 App. Ca. 574.

38 L. J. Ch. 630. See ante, p. 226.

(t) *Parkes v. Stevens*, L. R. 8 Eq. 365;

these well-known parts, and I adjust them in a manner totally different from that in which they have ever before been adjusted; I have found out just what it is that has made these parts, though they may have been used in machinery, fail to produce their proper effect, and it is this, that they have not been properly arranged; I have therefore reconsidered the whole matter, and put all these several parts together in a mode in which they never were before arranged, and have produced an improved effect by so doing,'—I apprehend it is competent to that man so to do, and that it would be perfectly impossible for him to say what is new and what is old, because, *ex concessis*, it is all old; nobody ever before used it in the manner in which he has used it. That, my lords, I apprehend, is the principle of a patent for a combination." (u)

"The claim of a combination or arrangement of parts of a machine without more," said Lord Chelmsford, in the same case, "is in itself a sufficient description of a novel invention, *i.e.* of a combination of parts which have never been combined in the same manner before. The explanation of the novelty is to be found in the description of the arrangement of the parts in the body of the specification. Whether the combination is new or not is a question of fact to be proved on a trial. It is not asserted that the description in the specification is not sufficiently explicit and clear to enable a workman of ordinary skill and information to make the thing patented. In what, then, is the claim in the specification supposed to fail? As far as can be gathered from the opinions of the judges, it is from the want of an explanation of the novelty of the invention. But if the claim is for a combination, it has been fully shewn that the claim itself is a statement and assertion of novelty." (v)

"*Foxwell v. Bostock* and the authorities upon which it is founded," said Romer, J., in *Perry v. La Société des Lunetiers*, (w) "have been explained by the Courts as amounting really to this, that where a claim is made to a general combination, if the combination is not new, but there is only an improvement in some part, then the patentee must point out and claim for the improvement, and not for the whole combination. If the claim is for a combination, and the combination is a novelty, then the patentee need not point out how far he claims novelty for particular portions which go to make up the combination." (x)

In *Parke v. Stevens*, (y) the invention was a glazed lamp,

(u) L. R. 1 App. Ca. pp. 583, 584.

(v) *Ibid.* pp. 579, 580, 582.

(w) 13 R. P. C. p. 670.

(x) See, also, *Moore v. Bennett*, 1 R. P. C. 129; *Proctor v. Bennis*, 4 R. P. C. 333

(y) 8 Eq. 358; 38 L. J. Ch. 627.

having a frame of sufficient strength and suitable for cleaning, but throwing a minimum of shadow. The specification described the lamp by reference to drawings, and the claim was as follows:—
 “The arrangement and combination of parts, hereinbefore described and represented in the drawings annexed, in the manufacture of railway-station and other lamps.” Sir W. M. James held this sufficient.

In *Murray v. Clayton*, (z) the plaintiff's claim was as follows: “The arrangement and construction of parts herein set forth for cutting clay into bricks. I claim particularly cutting the clay into the form of bricks by forcing the clay forward by means of a pushing board against a series of fixed wires so arranged that the clay is forced past the wires into a movable board provided with handles, so that twelve or any convenient number of bricks may be removed at the same time.” The Court of Appeal held that this was a claim for the entire machine, and good as such. James, L.J., said: “I am of opinion that the plain meaning of this specification is, that the plaintiff claims the machine. The claim is not to any particular part. It is a claim for the entire machine, produced by the arrangement and construction of the parts set forth.” (a)

Claim for Subordinate Integer.—Besides claiming generally a new combination of old parts, or of parts old and new, forming an entire novelty, the patentee may claim in addition subordinate parts or combinations constituting in themselves distinct entities of invention. If he desires protection for such subordinate entities he must, however, state specifically what they are, and make them the subject of distinct claims.

The judgment of Lord Cairns, C., in *Clark v. Adie*, (b) contains the most lucid exposition of the law on this subject. There the House of Lords held that the patentee had not claimed the subordinate integer, which alone the defendants had infringed. “In a patent claiming an entire instrument made by a consecutive number of steps,” said the Lord Chancellor, “there may at the same time be what I will term, as perhaps the most convenient phrase I can think of, an invention which is a subordinate integer in the larger combination. Inside the whole invention there may be that which itself is a minor invention, and which does not extend to the whole, but forms only a subordinate part or integer of the whole. Now, again, that subordinate integer

(z) L. R. 7 Ch. 570.

(a) Ibid. p. 578.

(b) 2 App. Ca. 315; 46 L. J. Ch. 585; 22 W. R. 456.

may be a step, or a number of steps, in the whole, which is or are perfectly new, or the subordinate integer may not consist of new steps, but may consist of a certain number of steps so arranged as to form a novel combination within the meaning which is attached by the patent law to the term 'combination.' In that case you may have to try a further question; you may have then to look at the patent, not merely as a patent for the whole instrument described, but as a patent which, in addition to claiming protection for the whole instrument so made, claims protection also for the subordinate invention, the subordinate integer, which enters into the combination of the whole. Suppose, my lords, that in a patent you have a patentee claiming protection for an invention consisting of parts which I will designate as A, B, C, and D; he may at the same time claim that as to one of those parts, D, it is itself a new thing, and that as to another of those parts, C, it is itself a combination of things which possibly were old in themselves, but which, put together and used as he puts them together and uses them, produces a result so new that he is entitled to protection for it as a new invention. In a patent of that kind the monopoly would or might be held to extend, not only to the whole or complete thing described, but to those subordinate integers entering into the whole which I have described. But then, my lords, the invention must be described in that way; it must be made plain to ordinary apprehension, upon the ordinary rules of construction, that the patentee has had in his mind, and has intended to claim, protection for those subordinate integers; and, moreover, he is, as was said by the Lords Justices, at the peril of justifying those subordinate integers as themselves matters which ought properly to form the subject of a patent of invention." (c)

Framing the Claim too Wide.—It is of the utmost importance that the patentee's claim should not be framed in language wider than the invention for which letters patent are sought. The Courts have always looked with disfavour upon inventors who try by the use of general and vague language to extend unfairly the range of their monopoly, and include what they have not invented.

In *Hill v. Thompson*, (d) Lord Eldon said: "There may be a valid patent for a new combination of materials previously in use for the same purpose, or for a new method of applying such materials. But in order to its being effectual, the specification must clearly express that it is in respect of such new combination

(c) 2 App. Ca. p. 321.

(d) 1 W. P. C. 229.

or application, and of that only, and not lay claim to the merit of original invention in the use of the materials. If there be a patent both for a machine and for an improvement in the use of it, and it cannot be supported for the machine, although it might be for the improvement merely, it is good for nothing altogether, on account of its attempting to cover too much."

In *Crossley v. Potter*, (e) Pollock, C.B., said: "A patent for an invention which is merely to obstruct every subsequent improvement, which is to step in and prevent the exercise of the ingenuity of mankind and the introduction of other inventions adapted to the particular subject to which the invention may be applicable; a patent which has for its object to snatch and grasp at everything in all directions which may possibly come within the general language the patentee may choose to adopt in his specification; a patent, the object of which is not to benefit the world by its communication, but to obstruct, by the very general character of the claims made for conferring peculiar privileges on the patentee—such a patent as that, in my judgment, cannot be supported."

In *Tetley v. Easton*, (f) the patentee, whose invention consisted of improvements in machinery for pumping water, described a wheel in his specification, and it was objected that the wheel was claimed, and that as it was old the patent was bad. Wightman, J., directed the jury that this was fatal to the specification; and the Court of Queen's Bench discharged a rule nisi for a new trial. Coleridge, J., said: "If a specification includes what is old, as well as what is new, the patentee must be taken to claim all, unless he clearly makes it appear that he does not claim that which is old." And Wightman, J., said: "It clearly appeared that the plaintiff claimed machinery composed of several elements, parts of which were old and part new. It is a settled rule of law that in describing such an invention it should be made clear on the face of the specification that the patentee does not claim as new what is old. . . . There is no doubt that, upon the authority of the cases cited, the claim is too large, and that upon this specification an action might have been maintained for an infringement by the use of the wheel alone."

In *Rushton v. Crawley*, (g) the patentee claimed the use and application of wool, and particularly that kind known as Russian tops, or other similar wools or fibre, in the manufacture of

(e) *Maor. P. C.* 245.

2 *H. & N.* 84; 26 *L. J. Ex.* 23, 305.

(f) *Maor. P. C.* 48; 23 *L. J. Q. B.* 77.

(g) *L. R.* 10 *Eq.* 522. See also *Lees v*

See, also, *Booth v. Kennard*, 1 *H. & N.* 527;

West London Cycle Stores, 9 *R. P. C.* 300.

artificial hair in imitation of human hair. He also claimed the use of the same material for the manufacture of crisped or curled hair for furniture upholstery and other like purposes. For the latter purposes it had been commonly used for years. In holding the patent bad, Malins, V.C., said: "The public must be told in very distinct language, in every specification, what are the articles they may use and what they may not use. Therefore, if a man makes a discovery, and, instead of limiting himself in his specification to that which properly is the discovery (if it be one), makes his specification too extensive, and claims more than he is entitled to claim, that is calculated to embarrass the public, and is, I apprehend, a fatal objection to the patent."

In *Jordan v. Moore*, (*h*) the invention was for improvements in the construction of ships. The patentee claimed, by his first claim, the construction of ships with an iron frame combined with an external covering of timber-planking for the sides, bilges, and bottoms. By a sixth claim he claimed the construction of iron frames adapted to an external covering of timber for the sides, bilges, and bottoms, *as described*. The validity of the sixth claim, for a frame of definite construction, was not disputed. But the first claim was impeached, as being for an iron frame of any construction. On behalf of the patentee it was argued that the first claim was limited by the sixth, and only included a frame of the described construction.

The Court, however, refused to so limit the first claim, and held the patent void. "We find nothing in the specification," said Byles, J., "requiring any definite degree of rigidity or strength, or any peculiarity of construction in the frame mentioned in the first claim. The first claim, therefore, is, according to our construction, a claim for planking with timber any iron frame of a ship." (*i*)

In *Wegmann v. Corcoran*, (*j*) the specification stated that the patentee preferred to make his mechanism of certain specified material—iron, coated with china. In fact, he knew of no other material suitable for the purpose. The patentee's second claim was as follows: "The application of squeezing rolls having a surface consisting of material containing so much silica as not to colour the meal or flour, and so as to have the hardness required for the purpose set forth." "It appears to me," said Fry, J., "the patentee's object in making this wide claim was this. He,

(*h*) L. R. 1 C. P. 624; 35 L. J. C. P.
268.

(*i*) Ibid. p. 635.

(*j*) L. R. 13 C. D. 65; 27 W. R. 357.

in substance, says, 'I have found out one thing, and I mean to claim everything else which will answer the purpose.' . . . Before such a claim can succeed, he must limit with exactitude the class of things he claims. I think he might have done so in one or other of two ways—by enumerating the qualities which the material must possess, or by referring to a particular substance, and saying that all other materials which had the qualities possessed by that for the purpose of this machine were within the specification. I think that, in this case, the patentee has done neither the one thing nor the other; but that, not knowing, or not caring to ascertain the class of materials which would answer his purpose, he has endeavoured to throw the drag-net of his specification so widely as to include everything which might possibly answer, and that it does, in fact, include materials which would not answer the purpose." (k)

Claims are a Protection to the Public.—While primarily a claim is intended as a protection to the patentee, it may also be said that it serves as a protection to the public, inasmuch as it operates as a clear warning to the public of that which they may not take or do without infringing the patentee's monopoly. And it is on the principle that the public are entitled to such notice that the Courts have gone in always requiring an inventor to distinguish in his specification, the old and the new.

In *Macfarlane v. Price*, (l) Lord Ellenborough, C.J., said: "The patentee in his specification ought to inform the person who consults it, what is new and what is old. He should say, My improvement consists in this, describing it by words if he can, or if not, by reference to figures. But here the improvement is neither described in words nor by figures, and it would not be in the wit of man, unless he were previously acquainted with the construction of the instrument, to say what was new and what was old. . . . A person ought to be warned by the specification against the use of the particular invention, but it would exceed the wit of man to discover from what he is warned in a case like this."

Claiming a Subsidiary Invention.—In framing his claiming clauses the patentee should carefully avoid claiming anything which is not actually of his own invention. As a claim covering what he has not invented, however inadvertently made, will, until disclaimed, undoubtedly render his patent void. It has been said that where the Court can do so, it will in the case of a meritorious

(k) L. R. 13 C. D. pp. 81, 82; see, also, *Dick v. Ellam*, 16 R. P. C. 414; 17 R. P. C. 196; *Kynoch & Co. v. Webb*, 17 R. P. C. 100.
(l) 1 Starkie, 199; 1 W. P. C. 75 n.

invention save the patent by reading such a claim as subsidiary to the main invention and as only claimed in connection therewith; as was done in the cases of *Plimpton v. Spiller* (m) and the *British Dynamite Company v. Krebs* (n). But it is obviously dangerous to rely on such benevolent construction, for it is impossible to predicate with any certainty when the Court will apply it. And even in *Plimpton v. Spiller*, which has perhaps gone further than any other case in this direction, the Court of Appeal were careful to affirm the general rule, though apparently relaxing its application.

In that case Brett, L.J., said: "At the same time, I think it cannot be denied that if a really independent claim of something which is not new, however inadvertently or carelessly it be made, is in fact made on the face of the patent, the Court is bound to hold that the patent is therefore objectionable, and that therefore the plaintiff cannot succeed. If this second claim had been in a form which would have applied to the runner of any other skate than that which is patented here, I should have thought it would have been bad, and that therefore the whole patent would have been bad, and this plaintiff could never recover." His lordship then proceeded to point out that the test question always is, Does the subsidiary claim itself increase the monopoly? (o)—"If you can say that the subsidiary claim in the patent cannot, under any circumstances, increase the monopoly of the patent itself, which is well claimed in the patent, it seems to me that the subsidiary claim is unimportant, is futile, has no effect, and therefore does not raise any objection to the patent. If you can bring it within the category of a subsidiary claim in the patent, you bring it within the principle stated by Lord Westbury (in *Neilson v. Betts*), and under those circumstances it is no objection to the patent."

In the *British Dynamite Company v. Krebs*, (p) where the patent was for improvements in explosive compounds and the means of igniting the same, the specification, after describing how the dynamite was to be made, stated three ways of exploding it, and concluded with the following claim: "I claim as the invention secured to me the mode herein set forth of manufacturing the safety powder or dynamite herein described, and also the modes of firing the same by special ignition as herein set forth." It was objected that some of those modes were not new, and that the

(m) 6 C. D. 412; 47 L. J. Ch. 211.

(n) 13 R. P. C. 193.

(o) 6 C. D. p. 434.

(p) 13 R. P. C. p. 193; Goodeve P. C. p. 93.

claim for the particular modes of ignition avoided the patent. The House of Lords, however, rejected this contention. Lord Cairns, C., having pointed out that the invention would be useless, and therefore not patentable, unless a mode of firing the dynamite was indicated, said: "I look upon the means of explosion, even assuming them to be known as applicable to other substances, to be part and parcel of the invention, which the patentee was bound to give to the public as a complete invention, and I understand him to claim these means of explosion only as part and parcel of this invention. He does not, as it seems to me, claim the means of explosion *in gross*, but only as *appendant* to dynamite; and he would not be allowed under this patent to claim them for any other purpose. In other words, he claims in the first claim the dynamite, the substance itself, and in the second claim the only mode of using the dynamite with which he was at the time acquainted. It is possible that, having stated the means by which the dynamite could be exploded, he might have omitted his second claim and contented himself with the first. But the second being, as it seems to me, merely a claim to the user of that which is included in the first, I cannot think that the patent should be avoided by the introduction of that which is merely useless."

In *Vorwerk v. Evans*, (q) where the patent was for "improvements in skirt waistbands, and in the method of and means for weaving webs suitable for such uses," there were two claims. The first claimed the waistband of the formation substantially as set forth and indicated hereinbefore, and in and by the accompanying drawings. The second claimed the taking-up motion, having conically formed rollers arranged and acting substantially as and for the purpose set forth and indicated. It was contended that the first claim was one to the product, the waistband alone, independently of the mode of making it. The Court of Appeal, however, held that reading the claims together, what the patentee claimed was not waistbands independently of the way by which they were produced, but a waistband made in the way pointed out by the patentee previously; that the first claim, in short, was one for a waistband, but made in the manner indicated, and the second for the mode of making it; and that the defendants had not infringed.

The following cases show how a claim of the kind suggested may be fatal to the patentee.

(q) 7 R. P. O. 265.

In *Roberts v. Heywood*, (r) the inventor of an improved machine for painting laths for Venetian blinds and other purposes, claimed the various parts of the machine, as well as the general construction and arrangement of the whole in combination. Amongst the parts claimed was "the shallow sliding tray, T., arranged and used substantially in the manner and for the purpose specified." This tray was a thing commonly known and used before the date of the patent. In an action for infringement, Hall, V.C., held that the claim for this tray could only be construed as a distinct claim to a separate invention, and that, as it lacked novelty, the patent was bad.

In *Cropper v. Smith*, (s) the invention consisted of improvements in lace-making machines, and the specification contained three claims. First, the whole combination or machine as described; secondly, those parts of the combination which constituted the upper portion of the machine; and thirdly, "the central longitudinal plate, C, connecting the end standards, and to which the front vertical stay cradle and back stays are secured." The whole combination was new and useful, and the first claim undoubtedly good; but the third claim, if read as a separate claim for the portion of the machine described in it, was bad, as wanting in novelty. At the trial Pearson, J., read the second and third claims as mere descriptions of what the patentee considered to be material in making up the entire combination, and not as separate claims. But the Court of Appeal, adopting a different construction, held that the claims were separate claims, and as the third was not new, found the patent bad. In giving judgment, Cotton, L.J. (*i.a.*), said: "The law is clear, and is laid down in the case in the House of Lords of *Clarke v. Adie*, (t) that where a man claims a patent for improvement in machines, he may claim for the whole of the combination which makes up that machine; but, if he thinks fit, he may do something more. To make up the entire combination there may be certain subordinate combinations, and, if he thinks he is justified in doing so, besides claiming the protection of his patent for the entire machine, that is, the combination taken as a whole, he may also claim protection and monopoly for the subordinate combination which, together, as integers, make up the entire machine. But, of course, he does it with this risk, that if he claims as the subject of his patent, and entitled to protection, not only the entire machine—the entire combination—but also the

(r) 27 W. R. 454.

(s) 1 R. P. C. 81, see p. 87.

(t) L. R. 2 App. Ca. 315.

subordinate combination, if it appears that any of these subordinate combinations were not novel, then his patent fails altogether. . . . When we find that the patentee claims, first of all, the general combination, with a previous declaration—I declare that I claim first so and so, second so and so, and third so and so—in my opinion, according to the fair construction of the language, and having regard to the use of the claim, it would be wrong to say that he is not intending to claim as that which he protects, 1, 2, and 3; and therefore one must deal with this as if Number 3 was, as in my opinion it is, a claim to an invention, to be protected by the patent; that is to say, he treats his claim, not only as a claim to the entire combination, but also as a claim to those subordinate combinations which are introduced into it, and help, together, with other things, to make the entire combination.”

In *Cassel Gold Company v. Cyanide Syndicate*, (u) the plaintiffs' invention was aimed at the extracting of gold in a state of solution from crushed ore and commercially free from the other baser metals present in the ore. The plaintiffs' patent claimed (1) The process of obtaining gold and silver from ores and other compounds, consisting in dissolving them out by treating the powdered ore or compound with a solution containing cyanogen, or a cyanide or cyanogen-yielding substance, substantially as hereinbefore described; (2) The process of obtaining gold and silver from ores and other compounds, consisting in dissolving them out by treating the powdered ore or compound with a dilute solution containing a quantity of cyanogen or a cyanide or cyanogen-yielding substance, the cyanogen of which is proportioned to the gold or silver or gold and silver, as hereinbefore described. The use of cyanide of potassium for extracting gold, irrespective of the amount employed, was not new. For the plaintiffs it was argued that the words at the end of Claim 1, “substantially as hereinbefore described,” limited that claim to the quantity of cyanide of potassium to be used in the solution to be applied to the ores in the same way as Claim 2 did, and that in neither claim was the use of cyanide of potassium at large claimed. But the Court of Appeal refused to accept this construction. “We cannot,” said Smith, L.J., in delivering the judgment of the Court, “read the specification in this way. We would if we could, but we cannot do so. It appears to us that Claims 1 and 2 are independent claims, having application to the whole specification; the first making claim for the use of any cyanide of potassium in solution, irrespective of amount,

(u) 11 R. P. C. 638; 12 R. P. C. 232.

substantially as therein described; and the second making claim for the uses of a dilute solution containing a specified quantity of cyanide of potassium, substantially as therein described. It appears to us impossible to discard either the one or the other, or to hold that both mean the same thing, or that Claim 1 applies to one part of the specification and Claim 2 to another; for this, in our judgment, is not the true construction of the specification as framed. If the first claim had been disclaimed or omitted, we should not have been faced with the difficulty, but as it is in the specification we are unable to read it as the plaintiffs desire to do; and for this reason, and for this alone, we must, with reluctance, give judgment for the defendants, and dismiss this appeal with costs."

In *Parkinson v. Simon*, (v) it was alleged that the patent was bad because out of four claims contained in the specification three were old. Each of these claims began with the words, "In apparatus such as described," and from these words the plaintiffs argued that these claims could be supported as linked to the fourth claim, which was valid. But the House of Lords refused to adopt this construction. Lord Herschell said: "The first point to be determined is, what is the meaning of the words 'in apparatus such as described'? *Mr. Bousfield* sought to interpret those words as including the entire description of the machine contained in the specification, and, so construing it, he said that the combination referred to in the claim was only claimed in such an apparatus; if, therefore, it had been used in any previous apparatus not containing all the specialities of the plaintiffs' machine, it was not within the claim, and therefore the claim was not anticipated by it. I find it impossible to put that construction upon the words 'in apparatus such as described.' The effect of it necessarily would be to make all the four claims mean exactly the same thing, because, of course, if 'in apparatus such as described' means apparatus containing every one of the parts described, and if you only claim what you do claim in that apparatus, obviously that is a claim to a combination which is precisely the same in each of the four cases referred to. It would be perfectly senseless to mention several parts if those parts were only claimed by you in connection with the other parts which you were describing, and perhaps claiming in some of the other claims. I think that construction, therefore, is inadmissible. I do not think it is the natural construction. I think 'in apparatus such

as described ' naturally refers to the general use of the apparatus specified in the first two lines of the specification, ' This invention relates to oscillating sieves used for purifying, grading, or separating middlings, grain, or other substances.' I think that, upon the true construction of this specification, any person using the combination described in Claim 2 in an apparatus of oscillating sieves would be infringing the patent."

In *Dowler v. Keeling*, (w) the patent was for improvements in hollow rivets and studs and in the process of riveting, such improvements being applicable to braces and other like articles. The complete specification contained four claims. By the first the patentee claimed a specified rivet or stud shown in a drawing, and also a combination therewith of discs and plates. The combination was good subject-matter, but the rivet or stud was lacking in novelty, and, being claimed separately, the Court of Appeal held the patent void.

A Claim to a Process which is Useless.—So, too, a patent will be bad should the patentee claim two processes or methods of achieving his purpose when one of these will not work in practice. For the reader of the specification, relying on its directions, might use the unsuccessful method or process, which would fail of its purpose from being too accurately used or performed after the patentee's instructions. (x)

In *Kurtz v. Spence*, (y) (an action brought to restrain threats) the patent on which the defendants relied claimed to purify sulphate of alumina by means of peroxide of manganese, whether in the hydrated or anhydrous form. The evidence shewed that the latter form was impracticable. On this Kekewich, J., held the patent bad. "The patentees," said the learned judge, "have not given that information to the public which the public have a right to demand at the hands of a patentee, or rather, they have informed the public that the result can be obtained by either of two processes, when one and only one of them will produce it, and, therefore, not having fulfilled their part of the bargain, their patent fails."

Nor will it save the patent, in such case, to shew that skilled workmen would know enough to see at once that the one process will not effect the object aimed at, and so confine themselves to the effectual process. (z)

(w) 14 T. L. R. 257; 15 R. P. C. 214.

(x) *Reg. v. Cutler*, 1 W. P. C. 76 n., per Denman, C.J. See, also, *Felton v. Greaves*,

3 C. & P. 611, per Tenterden, C.J.

(y) 5 R. P. C. 161, see p. 184.

(z) *Ibid.*

In *Simpson v. Holliday*, (a) two processes, one of which may be called the hot process, and the other the cold process, were described in the specification. The patentee denied that the processes were separate and distinct. The Court being against him on this, he then relied on the contention that even if there were two processes, the fact that one (the cold process) had been proved unworkable and of no utility did not vitiate his patent, because the specification stated that the desired result was obtained more quickly by the effectual process (the hot one), and therefore no one would think of using the cold process or be misled by it. The patentee further relied on the contention that any workman of ordinary knowledge and observation would reject the cold process and adopt the hot. Lord Westbury, C., held that the patent had been granted on a false suggestion and was bad at law. His lordship said: "If a specification alleges that a particular process, which may be slow, troublesome, and expensive, is efficient, and the statement is untrue, the vice is not removed by the fact that the same specification also describes another process, which is efficient, and which is stated to be speedy, certain, and economical. . . . If a specification describes several processes or several combinations of machinery, and affirms that each will produce a certain result, which is the object of the patent, and some one of the processes or combinations is wholly inefficient and useless, the patent will be bad, although the mistake committed by the patentee may be such as would be at once observed by an ordinary workman. I am, of course, speaking of cases where that process or machine which is inefficient is the invention or part of the invention that is claimed."

Where several claims are made, each separate claim must be new and useful, but it is not necessary that the respective claims should all be equally useful.

"A patentee who discovers a valuable invention when applied to the purpose he has chiefly in mind," said Romer, J., in the *Adamant Stone Company v. Liverpool*, (b) "does not invalidate his patent merely because he points out that it is, and claims it as being, also applicable to a subsidiary purpose of far inferior value, subject to the following observations: if the subsidiary claim is absolutely without utility, or has been anticipated, or required no invention, having regard to existing knowledge, then the patent must fail unless and until he amends his specification by confining it to the principal claim."

(a) 13 W. R. 577; L. R. 1 H. of L. 315; 12 L. T. (N. S.), 99. (b) 14 R. P. C. 22.

Construction of Claims.—A claim will be construed by the Court with reference to the specification of which it forms part, and not as a mere isolated sentence having no connection with what precedes it. (c)

(c) *Edison & Swan v. Woodhouse*, 4 R. P. O. p. 107; *Leadbeater v. Kitchen*, 7 R. P. O. 235; *Siddell v. Vickers*, 5 R. P. O. 416; *Edison-Bell Company v. Smith*, 11 R. P. O. 389. As to construction of the specification, see post, p. 255.

CHAPTER XII.

THE CONSTRUCTION OF THE SPECIFICATION.

General Rule of Construction.—The construction of specifications, like that of all other written documents, is a matter of law for the Court. But the Court will receive evidence as to the meaning of technical terms and words of art or science. (a)

In *Neilson v. Harford*, (b) Parke, B., in words which have frequently since been quoted as the leading dictum on this subject, said: "The construction of all written instruments belongs to the Court alone, whose duty it is to construe all written instruments, as soon as the true meaning of the words in which they are couched, and the surrounding circumstances, if any, are ascertained by the jury; and it is the duty of the jury to take the construction from the Court, either absolutely, if there be no words to be construed, as words of art or phrases used in commerce, and surrounding circumstances to be ascertained, or conditionally where those words or circumstances are necessarily referred to them. Unless this were so, there would be no certainty in the law, for a misconstruction of the Court is the proper subject of redress in a Court of error, but a misconstruction by a jury cannot be set right at all effectually."

So likewise in *Walton v. Potter*, (c) Tindal, C.J., directing the jury, laid down the general rule as follows: "As these specifications are drawn by men who are more conversant with the particular article than juries, who are selected indiscriminately from the public, and certainly much more than judges, whose knowledge is confined to one particular department, credit is given to witnesses, if they are conversant with the subject-matter of the invention, and are able to tell you, and you believe it, that they

(a) *Bovill v. Pimm*, 11 Ex. 718;
Simpson v. Holliday, 12 L. T. (N. S.), 99;
 5 N. R. 340; L. R. 1 H. of L. 315; *Telley*
v. Easton, Macr. P. C. 68.

(b) 8 M. & W. p. 823; 1 W. P. C.
 p. 370.

(c) 1 W. P. C. p. 595.

see enough on the face of the specification to enable them to make the article without difficulty.”

The Identity of Terms in Different Specifications is a Question of Fact.—It might happen that two specifications were framed in such identical language that the Court, without admitting any evidence as to the meaning of special terms, would be bound to hold the first to be an anticipation of the second. But this as a finding of fact, rather than as a matter of legal construction. “We by no means lay down, as a general rule,” said Campbell, C.J., in *Thomas v. Foxwell*, (d) “that upon a question of novelty of invention such as this, raised by the comparison of two specifications, it must necessarily be a pure question of law for the Court. The specifications may contain expressions of art and commerce, upon which experts must be examined, and there may be conflicting evidence, raising a question of fact to be determined by a jury. But it is quite clear that there may be cases in which the Court would be bound to decide the question of novelty exclusively, for the two specifications might be, *in ipsissimis verbis*, the same; and if they be in such plain and common language that the judge is sure he understands their meaning, he is bound to construe them as he does other written documents.”

Such a case, however, is clearly exceptional and not to be drawn into a general rule. In *Bush v. Fox*, (e) Lord Cranworth, C., used words which appeared to suggest that where anticipation by a specification was relied on, the Court ought to decide the issue of novelty so raised on a perusal of the specifications as a question of construction and without admitting evidence. Dissenting from this in *Hills v. Evans*, (f) Lord Westbury, C., said, “Some doubt was thrown on this subject by what fell from Lord Cranworth, C., in moving the judgment of the House of Lords in the case of *Bush v. Fox*; (g) and it seems to have been supposed by Pollock, C.B., in the case of *Booth v. Kennard*, (h) and evidently was supposed by the Court of Exchequer in the case of *Hills v. the London Gas Light Company*, (i) that *Bush v. Fox* had laid down this rule—that it was the province of the Court to compare the two specifications, and that the Court alone, from that comparison, might arrive at a conclusion as to the identity of the subject.”

After pointing out that the passage was clearly an *obiter dictum*—a mere expression of opinion, and not in any sense the

(d) 5 Jur. (N. S.) 37, p. 38.

(e) 25 L. J. Ex. 251; Macr. P. O. 183.

(f) 8 Jur. (N. S.), 528.

(g) Supra.

(h) 2 H. & N. 84.

(i) 29 L. J. Ex. 409.

ground of the decision—Lord Westbury proceeded: “It would be an unreasonable thing, therefore, to take this passage as the ground of the determination of the House of Lords. I cannot, therefore, consider the passage which I have read, notwithstanding the great and unfeigned respect which is due to the high authority of the noble and learned lord, as standing at all in the way of the conclusion which I arrive at, borne out and supported as it is by what I conceive to have been the uniform practice at *Nisi Prius*, that although the construction of the specification clearly is matter of law, yet if there be two specifications to be compared in order to arrive at a conclusion of fact, the right of drawing the inference of fact from the comparison belongs to the jury, and is a question of fact, and not a question of law.”

In *Hills v. Evans*, the defendant had attempted to upset the novelty of the patent by putting in evidence various prior specifications, and it was argued that if the Court could by collating these specifications extract from them the plaintiff's invention, it would decide the question of novelty as a matter of law and not of fact. Reviewing this argument, Lord Westbury, C., said: (j) “That undoubtedly is a question deserving of very serious consideration. It is undoubtedly true, as a proposition of law, that the construction of a specification, as the construction of all other written instruments, belongs to the Court; but the specification of an invention contains most generally, if not always, some technical terms, some phrases of art, some processes, and requires generally the aid of the light derived from what are called surrounding circumstances. It is therefore an admitted rule of law, that the explanation of the words or technical terms of art, the phrases used in commerce, and the proof and results of the processes which are described (and in a chemical patent the ascertainment of chemical equivalents)—that all these are matters of fact upon which evidence may be given, contradictory testimony may be adduced, and upon which, undoubtedly, it is the province and right of a jury to decide. But when those portions of a specification are abstracted and made the subject of evidence, and therefore brought within the province of the jury, the direction to be given to the jury with regard to the construction of the rest of the patent, which is conceived in ordinary language, must be a direction given only conditionally; that is to say, a direction as to the meaning of the patent upon the hypothesis or basis of the jury arriving at a certain conclusion with regard to the meaning

(j) 8 Jur. (N. S.), 257; 31 L. J. Ch. 461.

of those terms, the signification of those phrases, the truth of those processes, and the results of the technical procedure described in the specification. And so the rule is given by Parke, B., in delivering the judgment of the Court of Exchequer in the case of *Neilson v. Harford*.” (k)

On the comparison of the two instruments after they have received their legal exposition and interpretation, Lord Westbury further said: “As it is always a matter of evidence what external thing is indicated and denoted by any description, when the jury have been informed of the meaning of the description contained in each specification, the work of comparing the two, and ascertaining whether the words (as interpreted by the Court) contained in specification A do or do not denote the same external matter as the words (as interpreted and explained by the Court) contained in specification B, is a matter of fact, and is, I conceive, a matter within the province of the jury, and not within the function of the Court.” (l)

The dictum of Lord Campbell, in *Thomas v. Foxwell* (m) above mentioned, ought, it would seem, to be limited in application to cases where the specifications to be compared and collated contain neither technical terms nor any matters which are not common knowledge, otherwise it is inconsistent with the views expressed by the House of Lords in *Betts v. Menzies*, (n) a case in which (after obtaining the opinions of the judges) the House held that the identity of specifications of different dates must be a matter of evidence.

“Even if,” said Lord Westbury in that case, “there is identity of language in two specifications, and (remembering that these specifications describe external objects) even if the language is *verbatim* the same, yet if there are terms of art found in the one specification, and also terms of art found in the other specification, it is impossible to predicate of the two with certainty that they describe the same identical external object, unless you ascertain that the terms of art used in the one have precisely the same significance and denote the same external objects at the date of the one specification as they do at the date of the other. This is obvious; for, if we take two specifications, dated as the present are, one in the year 1804, and the other in the year 1849, even if the terms employed in the one were identical with the terms

(k) 1 W. P. C. p. 370.

(l) *Ibid.*; cf. *Muntz v. Foster*, 2 W. P. C.

93; *Walton v. Potter*, 1 W. P. C. 585.

(m) See p. 243, ante.

(n) 10 H. of L. Ca pp. 152, 153.

employed in the other, supposing that each of them contains a term of art, we will assume it to be a denomination of some engine, some instrument, some drug, or some chemical compound, it may well be that the thing denoted by that name in 1804 is altogether different from the thing denoted by that name in 1849. . . . It is clear, therefore, that if you compare two specifications, even if the language of both is the same, you cannot arrive at a certainty that they denote the same external object and the same external process, unless you enter into an enquiry, and ascertain as a fact that the things specified by the noun substantive in the one specification are precisely the same as the things signified by the same noun substantive contained in the other. In all cases, therefore, where the two documents profess to describe one external thing, the identity of signification between the two documents containing the same description must belong to the province of evidence and not to the province of construction."

A Specification must be Construed with Reference to Existing Knowledge at the Date when it was Drawn.—It is therefore a further rule of construction that the specification must be construed as of the date of its publication and with reference solely to the knowledge regarding its subject-matter then existing. (o)

In the *British Dynamite Company v. Krebs*, (p) the law was thus stated by Earl Cairns, C.: "In determining whether the specification is sufficient, the first thing is to ascertain what the invention is. This is a question of construction, and the construction of the specification is for the Court, to be determined like the construction of any other written instrument, the Court placing itself in the position of some person acquainted with the surrounding circumstances as to the state of art and manufacture at the time, and making itself acquainted as to the technical meaning in art or manufacture which any particular word or words may have."

The Spirit in which Specifications should be Construed.—The spirit in which the Court will approach the specification it is about to construe has frequently been the subject of judicial comment, and the *dicta* as to this cannot be easily reconciled.

At one time such documents were construed with great strictness, almost as if patentees were public enemies, whose rights the Courts ought if possible to defeat. A different rule has prevailed in modern times, under which an equally extreme view has been

(o) See Lord Esher, M.R., in *Nobel's Explosives Co. v. Anderson*, 11 R. P. C. 523; *Dick v. Ellam*, 16 R. P. C. 414; *Welsbach Incandescent Gas Light Co. v. New Incandescent Co.* 16 T. L. R. 205; 17 R. P. C. 237.
 (p) *Goodeve's* P. C. 88; 14 R. P. C. 192.

sometimes taken in the other direction. It may now, however, be laid down as generally accepted that it is the duty of the Court to hold "a fair hand between the patentee and the public," (q) and in the case of an ambiguous specification which is capable of more than one meaning, to adopt that interpretation which will support the patent. But such ambiguity must be a real ambiguity and not one manufactured for the purpose of escaping from the dilemma of a condemnatory construction. (r)

"Half a century ago," said Parke, B., in 1841, (s) "or even less, within fifteen or twenty years, there seems to have been very much a practice, with both judges and juries, to destroy the patent right, even of beneficial patents, by exercising great astuteness in taking objections, either as to the title of the patent, or more particularly as to the specification; and many valuable patent rights have been destroyed in consequence of the objections so taken. Within the last ten years or more, the Courts have not been so strict in taking objections to the specification; and they have endeavoured to hold a fair hand between the patentee and the public, willing to give the patentee, on his part, the reward of a valuable patent, but taking care to secure to the public, on the other hand, the benefit of that proviso which is introduced into the patent for their advantage, so that the right to the patent may be fairly and properly expressed in the specification."

In *Stevens v. Keating*, (t) the same learned judge said: "Some observations have been made at the bar on the subject of patents and specifications and the different rules of construction that have been applied at different periods. I take the rule to be that you are not to intend anything in favour of a specification or a patent, and certainly not to intend anything against it; you are to deal with it just as you find it; you are to put the true and right and fair construction upon every allegation and every fact connected with it, and you are to find what is the true and fair and just result."

Mere Lawyer's Objections are not Viewed with Favour by the Court.—The Court will not now be astute to support what may be called a mere lawyer's objection; and this especially so where the invention concerned is one of high utility and merit. In *Newton v.*

(q) Per Parke, B., in *Neilson v. Harford*, 1 W. P. C. p. 310. See, also, Lord Westbury, C., in *Simpson v. Holliday*, 5 N. R. 340; L. R. 1 H. of L. 315; 12 L. T. (N. S.) 99.

(r) Per Lord Davey in *Parkinson v.*

Simon, 12 R. P. C. 411.

(s) *Neilson v. Harford*, 1 W. P. C. p. 310. See, also, Pollock, C.B., in *Tetley v. Easton*, Macr. P. C. p. 65.

(t) 2 W. P. C. p. 187.

the *Grand Junction Railway Company*, (*u*) Rolf, B., referring to the manner in which the plaintiff's specification had in that case been criticized by the defendants' counsel said: "They discussed and scanned the language of the specification in the same sort of spirit as if it were a plea or replication specially demurred to. That is not the spirit in which a specification should be inspected. The proper mode is to construe it and see what is the good sense of it, and whether that which the patentee claims as his invention is there distinctly and clearly explained."

In *Haworth v. Hardcastle*, (*v*) Tindal, C.J., said: "There can be no rule of law which requires the Court to make any forced construction of the specification, so as to extend the claim of the patentee to a wider range than the facts warrant; on the contrary, such construction ought to be made as will, consistently with the fair import of the language used, make the claim of the invention co-extensive with the new discovery of the grantee of the patent."

In *Plimpton v. Spiller*, (*w*) an ingenious objection was taken to the patent, that a subsidiary claim in the specification was a claim to matter which was not new. On this Brett, L.J., said: "I think it is right to observe upon the nature of the objection to this suit, that it is brought to prevent the actual infringement of a real, substantial invention, and it is not now denied that that invention is a valuable invention, and that substantially it has been infringed. But then, in order to defeat the plaintiff, there is an ingenious suggestion that a minor and wholly inappreciable claim has been made of something which is not novel. The plaintiff has not complained of anybody infringing that particular part of the claim, and nobody has actually infringed that particular part of the claim. It is therefore an objection which may be properly styled to be a lawyer's objection. It is not denied that if the claim be erroneous it may be disclaimed to-morrow. Therefore, the only object of this objection is to prevent the plaintiff from obtaining that which in substance it is admitted he is entitled to claim, and, under the circumstances, I agree with the Master of the Rolls, that the Court ought to be anything but astute to support such an objection."

Obscurities in the Specification.—Obscurity in a specification occasioned by the use of loose expressions, or such mistakes as the Court can regard as mere inaccuracies in the wording of the

(*u*) 5 Ex. p. 335; 20 L. J. Ex. p. 429.

(*w*) L. R. 6 C. D. 412, p. 432; 47 L. J.

(*v*) 1 W. P. C. p. 485; 1 Bing. N. C. Ch. 211, p. 216.
p. 191; 3 L. J. C. P. p. 317.

document, will not be construed as fatal to its validity, if the evidence shews that the document is intelligible, notwithstanding these defects, to a workman of ordinary skill. (x) But, of course, such inaccuracies must not need exceptional skill and knowledge to correct them, for that puts the public on further invention.

In *Derosne v. Fairie*, (y) Lord Abinger, C.B., said: "It must be admitted that the specification is obscure. The gentleman who composed it is not an Englishman, and he uses the word 'baked' evidently for boiling, and the word 'discolouration' for discharge from colour; but all that is conceded. One would not be disposed, from any obscure word in the specification which might be interpreted in favour of the plaintiff, taking it altogether, to deprive him of his patent."

So, again, in *Palmer v. Wagstaffe*, (z) Pollock, C.B., said: "We ought not to violate the plain meaning of language, unless it is quite clear something else was meant. For instance, 'imponderable' might be a clear mistake for 'ponderable,' or a term might be borrowed from another language and an enlarged meaning given to it, according to its original meaning, as where 'vice' was held to include a 'screw.'" (a)

In *Hills v. London Gas Light Company*, (b) Bramwell, B., disposing of a similar objection, said: "The next objection was, that the plaintiff's specification was insufficient on this ground: He says, 'I use the hydrated or precipitated oxides.' It was said that included all hydrated oxides, and inasmuch as some of the natural hydrated oxides would not do, the plaintiff's specification was bad. Now, that question turns upon this. If the plaintiff in his specification means all the hydrated oxides, it is open to that objection; but if he means only those hydrated oxides which are also precipitated, that is the artificial hydrated oxides, it is not open to that objection. It may be said that the language is in any sense ungrammatical, and that hydrated or precipitated—the whole or the part—cannot be right. To say, 'the works of Shakespeare, or Hamlet, and King Lear,' would obviously be an inaccuracy which cannot be judged by the ordinary rules of grammar, and therefore we must endeavour to find out the proper meaning of this inaccurate expression. It appears to us, upon looking at the

(x) Per Bowen, L.J., in *Miller & Co. v. Scarle*, 10 R. P. O. p. 111.

(y) 1 W. P. O. pp. 156, 157.

(z) 23 L. J. Ex. p. 218; 9 Ex. p. 501.

(a) *Bloxam v. Else*, 1 O. & P. 558.

(b) 5 H. & N. pp. 368, 369; 29 L. J. Ex. p. 424.

specification, that the plaintiff uses those as equivalent expressions, because he says 'hydrated or precipitated,' and that oxide of iron may be conveniently *prepared* for these purposes, and so on; and therefore it is obvious that when he uses that word 'hydrated,' he uses it as synonymous with precipitated; and consequently, when he speaks of using hydrated or precipitated oxides, he means such hydrated oxides as are precipitated. That is the construction we put upon the specification, and therefore we think that objection fails."

In *Edison v. Woodhouse* (first action), (c) the owners of three patents relating to the construction of incandescent electric lamps brought an action for infringement. The defendants objected that the second claim of one of these patents was bad for vagueness of description. The claim read as follows: "The combination of a carbon filament within a receiver made entirely of glass, through which the leading wires pass, and from which receiver the air is exhausted for the purposes set forth." In place of the filament a rod of carbon had before been used, and it was argued that the difference between the filament and the rod was only a difference of degree, and that, the degree not being specified, the patent was void.

On this objection, Fry, L.J. (delivering the judgment of himself and Bowen, L.J.), said: "The specification is, it is argued, bad, as being too indefinite and vague. To this argument it may, in our opinion, be properly replied that in a patent of this description definition is required only to such an extent as would enable a practical workman to construct the required apparatus; that there is distinct evidence that such a workman could make the required apparatus from the specification, and that no witness of the defendant's alleges that such a workman would have any difficulty or require any further experiments, and that the specification itself, as we have already shewn, contains descriptions of six forms of filament, and these descriptions, it is obvious, would afford material assistance to any workman in doubt."

In *Edison v. Woodhouse* (second action), (d) this rule was again applied by the Court in construing the specification. In that case the patentee in his specification made use of three expressions, all apparently to describe the same thing—"hydro-carbon gas," "carbon gas," and "carbonic gas." It was urged by the defendants that these expressions were calculated to mislead the public, being inaccurate terms for what the patentee employed

(c) 4 R. P. C. 79, see p. 92.

(d) 3 R. P. C. 183; 4 R. P. C. 99.

them to describe, and being wide enough to include two gases which would not produce the desired result. The case was tried before Butt, J., who was of opinion on the evidence that the patentee did not mean exactly what he said in using any one of these expressions, but who also found that the specification was not misleading, as no person of ordinary knowledge, in his senses, would think of applying carbonic acid and carbonic oxide to the operation in question. The learned judge accordingly held the specification sufficient.

On appeal, the judgment below was affirmed. Disposing of this objection, Lindley, L.J., in delivering the judgment of the Court, said: "One objection is that the expression, carbon gas or liquid, in the claim is ambiguous, and too wide and misleading. It is urged that the expression includes carbonic oxide and carbonic acid, neither of which will do. But every claim in every patent must be read and construed with reference to the specification, and not as if the claim was an isolated sentence, having no connection with or reference to what precedes it. To see what is meant by carbon gas or liquid, we must turn to the specification; and when we do so, we cannot conceive that any one reading this specification fairly, with a view to understanding it, would ever dream for a moment that carbonic oxide or carbonic acid would answer the purpose, or could be meant by carbon gas. . . . The chemical experts, as might have been expected, ridiculed the notion that any one would think of trying carbonic oxide or carbonic acid. In the body of the specification we find that by 'carbon gas or liquid' is meant what the patentee calls a hydro-carbon gas or liquid, and he states that beeswax, balsam, and most oils, if pure, operate satisfactorily; and that almost any hydro-carbon will answer. The appellants on this urge that beeswax, and balsam, and oils, are not, properly speaking, hydro-carbons; and that the specification is inaccurate and misleading. The evidence shews that, in its technical sense, hydro-carbon is a chemical combination of hydrogen and carbon, and nothing else; and beeswax, balsam, and oils, are not technically hydro-carbons. They contain hydrogen and carbon chemically combined with each other, but also with other substances. But the evidence also shews that, so far as is known, every substance which is a hydro-carbon, either in its technical sense, or in the looser sense in which the patentee uses the expression, does answer the purpose; and there is no evidence that anything which answers the description of hydro-carbon, in either sense, will not answer the purpose. In this state

of the evidence it is impossible for the Court to say that the specification is open to serious objection, or is insufficient on the ground alleged. . . . If the language of a specification is clear enough to guide a competent workman, and enable him to obtain the desired result, we cannot see how a Court can hold the language insufficient in point of law. No doubt it is for the Court, and not for a workman, to construe the specification; but if a workman says it is a sufficient guide to him, and the Court believes him, the Court must hold that, as regards clearness of description, the specification is, in point of law, sufficient." (e)

The case of *Plimpton v. Spiller* (f) is instructive as illustrating how far the Court will go in allowing the general spirit of a specification to govern and prevail over the clumsy use of particular language. But it is only an illustration, and must not be taken as laying down principles of general application. (g)

In that case the patentee had claimed in his specification, first, a mode of applying rollers and runners to the footstands of skates, in order that they might be cramped or turned, so as to cause the skate to run in a curved line by the canting or tilting of the footstand; and, secondly, the mode of securing the runners and making them reversible, as described in the specification. To this second claim it was objected that there was nothing novel in the mode of securing the runners to the footstands. But the Court held that, assuming this to be so, the want of novelty in the second claim ought not to invalidate the patent, because the second claim must be read as claiming a subsidiary invention, to be used only in connection with the principal invention.

"There are few patents of complicated inventions," said Jessel, M.R., "even as regards the text and drawings, where some mistake or other is not made. Accuracy, as we all know, is very difficult of attainment; and when the judge sees that there is a real, substantial invention of great merit, and the description is fairly made, so that a competent workman can make the invention, it is not his duty to endeavour to construe the patent so as to make it claim that which it is utterly absurd to suppose would be claimed, because it is so well known, as a matter of public notoriety, that nobody would think of claiming such a thing." (h)

Construction of the Specification not to be Determined by Experts.
—Inasmuch as patent actions frequently involve an enquiry into

(e) 4 R. P. C. pp. 107, 108.

(f) L. R. 6 C. D. 412; 47 L. J. Ch. 211,

(g) See *Cropper v. Smith*, 1 R. P. C.

pp. 90, 91 (per Bowen and Fry, LL.JJ.).

(h) L. R. 6 C. D. p. 423.

matters of a highly technical or scientific nature, the evidence of experts is often tendered by the parties. But while such witnesses may give valuable assistance to the Court as to the meaning of terms in a specification, it is not for them to construe the document itself, and statements as to their opinion upon what the specification means are wholly inadmissible. They may inform the Court regarding the facts, but the Court, in light of that knowledge, must itself construe the specification. (i)

“In all cases,” said Lindley, L.J., in *Brooks v. Steele*, (j) “the nature of the invention must be ascertained from the specification, the interpretation of which is for the judge, and not for any expert. The judge may, and indeed generally must, be assisted by expert evidence to explain technical terms, to shew the practical working of machinery described or drawn, and to point out what is old and what is new in the specification. Expert evidence is also admissible, and is often required to shew the particulars in which an alleged invention has been used by an alleged infringer, and the real importance of whatever differences there may be between the plaintiff’s invention and whatever is done by the defendant. But, after all, the nature of the invention for which a patent is granted must be ascertained from the specification, and has to be determined by the judge, and not by a jury nor by any expert or other witness.” (k)

Benevolent Construction.—It has sometimes been said that the Court will construe a specification benevolently, and dicta to that effect are to be found in several modern cases. (l) The expression is not a happy one as applied to the construction of specifications in patent cases, and the doctrine was reduced to its due proportions by the Court of Appeal in *Cropper v. Smith*. (m)

“It seems to me,” said Bowen, L.J., in that case, “that the prayer for grace is very often addressed to Courts under circumstances which preclude the propriety of their entertaining it for a moment. It is quite true that in old times a great many judges were supposed to be astute to defeat patents, and as a corrective, so to speak, to that inclination of the Courts, it became necessary for the tribunal to warn itself that patentees must be fairly dealt

(i) See the observations of Smith, L.J., as to this in *Gadd v. Mayor of Manchester*, 9 R. P. C. p. 532.

(j) 14 R. P. C. p. 73.

(k) Cf. Lord Cairns, C., in *British Dynamite Co. v. Krebs*, 13 R. P. C. p. 192.

(l) See Jessel, M.R., in *Hinks v. Safety*

Lighting Co., L. R. 4 C. D. p. 612; 46 L. J. Ch. p. 185; and in *Otto v. Linford*, 46 L. T. p. 39.

(m) 1 R. P. C. 80, p. 89. See, also, Lindley, L.J., in *Needham v. Johnson*, 1 R. P. C. p. 58.

with, as between themselves and the public; and as a canon of construction accordingly, reference has been made from time to time in various cases, made to the idea that a benignant or benevolent construction was one that ought to be invoked; that is to say, reference has been made to an old principle of construction, which is not at all special to the subject-matter of patents, but applies to all documents and all deeds, which is as old as *Coke* and *Sheppard's Touchstone*, to the effect that the interpretation of a written document ought to be benevolent or benign. '*Verba debent intelligi cum effectu ut res magis valeat quam pereat.*' Now, that is only a caution against excessive formalism; it only means that when you can see what the true construction of the document is, or, in other words, what the true intention of the parties is, as expressed in their language, you must not allow yourself to be drawn away from the true view of the document by over-nicety in criticism of expression. That is what seems to me to be meant. You must remember that the parties meant to do something by their deed, and you must not defeat it, if effect can be given to their intention by a fair construction of the whole of the document. It is almost always coupled with another maxim, which seems to me really to be the same thing in another shape: '*Verba intentioni debent inserviri.*' You must construe particular words so as not to defeat the clear intention of the whole. That is what seems to me to be the meaning of the maxim, that the interpretation of documents ought to be benevolent or benign; but having said that, it follows that although there may be cases in which you use it when the validity of the patent is in question, it certainly never can be used when the construction of a document is clear; that is to say, it is a guide to help you to construe a document; it is not an excuse to justify you in misconstruing a document." (n)

"I am clearly of opinion," said Lord Esher, in *Nobel's Explosives Company v. Anderson*, (o) "that whether the patent be a pioneer patent, or a master patent, or a patent for a first invention, or whether it be a valuable patent, or a patent for the smallest thing, or whether it be a patent for an improvement, or whatever the patent may be, the canons of construction of the patent are precisely the same. What is more, I am further of opinion that the canons of construction of a patent are the same canons of

(n) See this "most admirable judgment" approved in *Benno Jaffe v. Richardson*, 11 R. P. C. 271; *Hocking v. Hocking*, 6 R. P. C. 73 (per Lord Halsbury, C.);

Nobel's Explosives Co. v. Anderson, 11 R. P. C. 523; and in *Tolson v. Speight*, 13 R. P. C. p. 721.

(o) *Supra*.

construction that are to be applied to every written instrument which has to be construed by the Court."

"You are not," said Lord Davey in *Kynoch & Company v. Webb*, (p) "to put a forced construction on the specification, as not intending to claim something that is old, because it was foolish or suicidal of the patentee to claim it."

In Construing Claims the Whole Specification must be Looked at.—Every specification must conclude with a distinct statement of the invention claimed. In construing such statements the proper course is to first read the specification through, and see what the inventor proposed to patent, and then construe the claim in the light of the information so obtained. (q) For a claim is not an isolated sentence having no connection with what precedes it.

"I do not think," said Lord Hatherley in *Arnold v. Bradbury*, (r) "that the proper way of dealing with this question is to look first at the claim, and then see what the full description of the invention is, but rather first to read the description of the invention, in order that your mind may be prepared for what it is the inventor is about to claim. He tells you that he has now described and particularly ascertained the nature of his invention, and the manner in which it is to be performed, and then in the claim we do not find anything asserted or claimed as his invention beyond what is found in the previous part."

In *Edison-Bell v. Smith*, (s) Lord Esher, M.R., following the above rule, said: "When objection is taken to the claim, or to any one of several claims, it is not using the true canons of construction to read that alone and to say that, without regard to what there is in the rest of the patent, that means so-and-so, or that means what is stated as the objection, and, therefore, reading it in that way, you must hold that the patent is bad. You must look at the whole of the specification, and then, having looked at the whole, if it is an objection to the claim, see what the claim, on the true construction of it, is, having regard to the whole of the instrument. . . . That is the rule which, I think, is the right one, and it is the same rule as you would apply to the construction of any instrument. Read the whole of it before you determine upon an objection to any particular part of it. When you have read the whole of it you must come back to that which is objected to, and see what is the fair construction of it, having regard to what you

(p) 17 R. P. C. 116

(r) L. R. 6 Ch. p. 712; 24 L. T. 613.

(q) See Lindley, L.J., in *Edison v. Woodhouse*, 4 R. P. C. 107.

(s) 11 R. P. C. pp. 395, 369.

read before. You must not distort it; you must not add to it; you must construe it as it is, but construe it fairly."

Where the claim contains the words "substantially as described and set forth," the patentee is limited in the construction of such claim by the earlier descriptive part of the specification, which will be held to control the claim. (t) But the patentee in such case is not tied down to the very words of the letterpress, to the exclusion of what may be included in the drawings of the specification. (u)

In *Maxim-Nordenfelt Company v. Anderson*, (v) where the patent was for a smokeless explosive compound, the patentee stated in his specification that he produced his explosive compound by mixing gun-cotton or pyroxyline with nitro-glycerine, nitro-gelatine, or similar material, and with oil, preferably castor oil, in, or about in, the following proportions, viz., from two to five per cent. of the castor oil, from ten to fifteen per cent. of the nitro-glycerine or the like, and the remainder of gun-cotton. The first claim was as follows—"An explosive compound consisting essentially of gun-cotton or pyroxyline mixed with nitro-glycerine, nitro-gelatine, or similar material, and with castor oil or other suitable oil for the purpose above specified." The plaintiffs contended that this claim covered any combination of the specified substances, no matter what the varying proportions were. The defendants argued that the words "in, or about in," contained in the body of the specification, governed the claim and limited the plaintiffs' invention to a combination of the named substances in, or about in, the specified proportions. The House of Lords held that the defendants' contention was right; that the proportions given by the plaintiffs (in which gun-cotton greatly predominated) were the essence of the invention, and that the manufacture of cordite, which contained fifty-eight per cent. of nitro-glycerine and only thirty-seven per cent. of gun-cotton, was no infringement of the patent.

Where a specification has once been construed by the Court, a Court of co-ordinate jurisdiction will regard such construction as binding, and follow it in a subsequent action on the same patent. (w) But this rule will not prevent the Court which hears the second action from exercising its judgment on the effect of fresh evidence. (x)

(t) *Brooks v. Lamplugh*, 15 R. P. C. 49.

(u) *Pneumatic Tyre Co. v. Tubeless Tyre*, 15 R. P. C. 243; 14 T. L. R. 341; 16 R. P. C. 79; 15 T. L. R. 105.

(v) 14 R. P. C. 671; 15 R. P. C. 421.

(w) *Hills v. Liverpool Gas Co.* 32 L. J. Ch. p. 30; *Slazenger v. Feltham*,

6 R. P. C. 132; per Bowen, L.J., in *Edison & Swan v. Holland*, 6 R. P. C. 252.

(x) See Cotton, L.J., in *Edison v. Holland*, 6 R. P. C. pp. 280, 281; also Lord Halsbury, C., in *Automatic Weighing Machine Co. v. Combined Weighing Machine Co.*, 6 R. P. C. p. 370.

CHAPTER XIII.

AMENDMENT OF THE SPECIFICATION.

Power of Amendment a Statutory Relief.—The consideration for a patent grant being one and indivisible, a failure in part is a failure in all. (a) If a part of the alleged invention, for example, is not new the whole grant is void, so long as the specification still claims that part, no matter how novel and meritorious the rest may be. Great hardship would therefore sometimes be inflicted on deserving and ingenious persons if the law afforded no means of curing such a defect in a patent. It may easily happen in the case even of the most diligent and careful inventor, that the drag net of his claim is thrown too wide, and some matter lacking novelty or utility inadvertently included. Where this occurs the letters patent are void by reason of the defective matter included in the claim; and if no power existed of limiting the claim by amendment to that which the patentee had in fact invented, the unfortunate inventor would lose the entire fruit of his labour and ingenuity. The expediency, therefore, of providing a remedy in such case, to save that portion of the patent which is not open to objection, is at once apparent.

No such power of amendment existed at common law. Alterations in the terms of a patent grant could only be sanctioned in the same way in which the letters patent had themselves been authorized, viz., by a second sealing with the great seal. The patentee who desired to obviate such a defect in his grant had therefore to go again to the Crown for what was in effect a new patent. A jurisdiction to amend trifling errors was, it is true, vested in the Master of the Rolls, as custodian of the records in Chancery. But this jurisdiction only extended to clerical errors, mistakes *per incuriam et ex inani inadvertentia scriptoris*. The letters patent, when a grant was made, were delivered to the grantee as evidence of his title, but the enrolment of the patent

(a) See ante, pp. 63, 64.

and specification remained as records in Chancery, in the keeping of the Master of the Rolls, whose right of interference with such documents only extended to seeing that they actually corresponded with the originals. (b)

Former Practice as to Amendments.—The hardship occasioned to patentees by the absence of any power of amendment at length attracted the attention of the Legislature. Disclaimers and memoranda of alteration were first allowed by 5 & 6 Wm. IV. c. 83. The leave of the Attorney or Solicitor General was, however, required for amendments under this Act. Once leave was given, and the disclaimer filed and enrolled, it became part of the letters patent or specification from the date of the filing. (c) The power of amendment thus given was, however, strictly limited to disclaimer.

Explaining the object of this Statute, in *Regina v. Mill*, Maule, J., said: "The principle of the enactment seems to be this: Where a patent is void for claiming too much, and the case one which appears to the Attorney General to be proper for the exercise of his discretion in allowing a disclaimer, the patent is not to be altogether avoided, but may be amended in the mode prescribed. In the exercise of this discretion great care ought to be, and no doubt is, taken that injustice be not done to third parties or to the public." (d)

Under this Act it was held that the grantee who had obtained the patent was the person who must enter the disclaimer, even where he had assigned his interest. (e) This inconvenience was removed by 7 & 8 Vict. c. 69, s. 5, which permitted assignees of letters patent to enter disclaimers. Section 15 of 12 & 13 Vict. c. 109, provided that specifications and disclaimers should be enrolled in the enrolment office of the Court of Chancery; and 15 & 16 Vict. c. 83, (f) required them to be filed. The last-mentioned Act also enacted that no action should be brought in respect of any infringement of a patent in connection with which a disclaimer

(b) See Lord Langdale, M.R., *In re Sharpe's Patent*, 3 Beav. 245, pp. 251–253. How far this jurisdiction still survives would seem to be doubtful. In any case it is now of little importance, as the Comptroller-General of Patents has ample power to amend clerical errors. See the Patents Act, 1883, s. 91, and P. R. 1890, rule 16. As to the jurisdiction of the Master of the Rolls, see *In re Johnson's Patent*, 5 C. D. 503; *In re Berdan's Patent*,

L. R. 20 Eq. 346; *In re Morgan's Patent*, 24 W. R. 245; *In re Gare's Patent*, 26 C. D. 105.

(c) *Perry v. Skinner*, 2 M. & W. 471; *Reg. v. Mill*, 10 C. B. 379; 14 Beav. 312; 20 L. J. C. P. 16.

(d) 10 C. B. p. 395; 20 L. J. C. P. 16.

(e) *Spilsbury v. Clough*, 2 Q. B. 466; 11 L. J. Q. B. 109; 1 W. P. O. 255.

(f) The Patent Law Amendment Act, 1852.

had been filed where such infringement had occurred prior to the filing of the disclaimer, unless the Law Officer certified by his *fiat* that such action might be brought, notwithstanding the filing of such disclaimer. (g) By 16 & 17 Vict. c. 115, certified copies of disclaimer were made receivable in evidence. All these Statutes were repealed by the Patents Act, 1883, which, with the amending Acts, now governs the practice as to the amendment of specifications.

Discussing disclaimers under these earlier Statutes, Lord Westbury in the House of Lords in 1865 said: (h) "The object of the Act authorizing disclaimers was plainly this, that when you have in your specification a sufficient and good description of a useful invention, but that description is imperilled or hazarded by something being annexed to it which is capable of being severed, leaving the original description, in its integrity, good and sufficient, without the necessity of addition, then you might, by the operation of a disclaimer, lop off the vicious matter and leave the original invention as described in the specification untainted and uninjured by that vicious excess. But it was never intended that you should convert a bad specification, in the sense of its containing no description of any useful invention at all, into a good specification, by adding words that would convert what has been properly called in the Court below, 'a barren and unprofitable generality,' into a specific and definite and practical description."

Amendment under the Patents Act, 1883.—The present practice on amendments may best be considered under the following heads: (1) Amendments required by the Comptroller after receiving the examiner's report as to an application for a patent. (2) Amendments at the instance of the applicant or patentee, after the filing of the complete specification. (3) Amendments when an action is pending in regard to the patent, or after a petition for its revocation has been presented.

1. *Amendments required by the Comptroller.*

These amendments are now governed by Section 2 of the Patents Act, 1888, and Section 9 of the Patents Act, 1883. The former of those sections deals with the provisional specification, and provides that if the examiner to whom an application for letters patent has been referred reports that the nature of the

(g) The Patent Law Amendment Act, 1852, s. 39.

(h) *Ralston v. Smith*, 11 H. of L. Ca. p. 243; 35 L. J. C. P. p. 54.

invention is not fairly described, or that the application, specification, or drawings, has not, or have not, been prepared in the prescribed manner, or that the title does not sufficiently indicate the subject-matter of the invention, the Comptroller may refuse to accept the application, or require that the application, specification, or drawings be amended before he proceeds with the application.

Section 9 of the Patents Act, 1888, relates to the usual case of a complete specification, that is to say, where that document is left after a provisional specification has been delivered, and provides that if the examiner in such case reports that the complete specification has not been prepared in the prescribed manner, or does not describe substantially the same invention as that described in the provisional specification, the Comptroller may refuse to accept the complete specification, unless and until the same shall have been amended to his satisfaction.

In both of the above cases an appeal lies from the Comptroller to the Law Officer, whose decision in the matter is final. (*i*)

The machinery of the Acts under which specifications are referred to examiners for report does not limit the discretion of the Comptroller to requiring only such amendments as the examiner may suggest. The Comptroller may himself require an amendment to be made where he considers it necessary, whether such amendment has been suggested by the examiner or not. (*j*)

Where an applicant files his complete specification with a restricted title, the Comptroller may, under the above sections, amend the title of the provisional specification, so as to make the two documents agree; but such amendment can only be made by way of excision. (*k*)

Where the Comptroller requires an amendment to be made before an application is allowed to proceed, he may also direct that such application shall bear date from the time when the requirement is complied with. (*l*)

The Comptroller's power of requiring amendments is only intended to be exercised before the specifications have become public property: (*m*) thereafter all amendments must be made at the instance of the patentee, under the provisions of a different section, which will next be considered.

Inventors should remember that while the Comptroller has

(*i*) Patents Act, 1888, s. 2 (2) (3);
Patents Act, 1883, s. 9 (2) (3).

(*j*) *C's Application*, 7 R. P. C. 250.

(*k*) *Dart's Patent*, Griff. P. C. 307.

(*l*) Patents Act, 1888, s. 2 (1).

(*m*) *Jones' Patent*, Griff. P. C. 313.

this ample power of amendment, it is not a matter of course that he will exercise it in favour of a careless applicant, who sends in a specification so negligently framed that a grant cannot be made upon it without amendment. (n) In practice, extensive amendments will not usually be allowed; and an applicant must not think that it is open to him to cast his net as widely as he pleases in his claims, and then come to the Comptroller and say it is a case for amendment. (o)

2. *Amendments of Specifications at the Instance of the Patentee when no Action for Infringement, and no Proceeding for Revocation of the Patent, is Pending.*

The special statutory provisions dealing with these amendments are contained in Section 18 of the Patents Act, 1883. (p) Commenting on that section in *re Hall and Others*, Smith, J., said: "Section 18 gives power to a patentee, when he finds out the blunder in his specification, himself to seek leave to amend his specification by way of disclaimer, correction, or explanation; and he can go, *proprio motu*, to the Comptroller and say, 'I want to amend the blunder I have got in my specification, as regards disclaimer, correction, or explanation.' " (q)

The Comptroller-General of Patents and the Law Officer are the special authorities in whom is vested the sole jurisdiction to permit or refuse amendments under this section. No amendment can be obtained without the consent of the Comptroller or (if the matter be appealed) of the Law Officer on appeal from the Comptroller.

If it is desired to amend a complete specification after it has been filed, but before the sealing of the letters patent, leave must be sought by the applicant himself. But once the letters patent have been sealed, any person for the time being entitled to the benefit of the letters patent may make the application. (r)

Application, how Made.—The application must be made by request in writing, signed by the person qualified to apply, and stating the nature of the proposed amendment and the reasons

(n) *Thomas & Prevost's Application*, 16 R. P. C. 69.

(o) *Garnett's Application*, 16 R. P. C. 154.

(p) See, also, Patents Act, 1888, s. 5.

(q) 5 R. P. C. 312; 21 Q. B. D. 137.

All applications for amendment after the complete specification has been published (even if made before that specification has been accepted) ought to be made under s. 18. See *Jones' Patent*, Griff. 313.

(r) Patents Act, 1883, s. 18 (1); s. 46.

for it. (*s*) The reasons are a part of the request; but the application should not apparently be refused merely because the reasons stated in the request are insufficient. (*t*) The request for leave to amend must be sent to the Comptroller-General of Patents at the Patent Office.

It may be left at the office or sent through the post. (*u*) It must be accompanied by a duly certified copy of the original specification and drawings, shewing in red ink the proposed amendment. (*v*) The request for leave to amend is, on receipt at the Patent Office, advertised by the Comptroller in the official journal. (*w*) Intimation is thus made to the public of the proposed amendment, and the reasons assigned for it. (*x*)

Opposition to Amendment.—Any one may, within one month from the first advertisement, give notice at the Patent Office of opposition to the proposed amendment. (*y*) A notice of opposition must state the grounds on which the person giving such notice intends to oppose the amendment. It must be signed by the opponent, and state his address for service in the United Kingdom. (*z*) The Comptroller has, however, allowed notices of opposition to be signed subsequently to their acceptance at the Patent Office, where, in his opinion, no prejudice was thereby occasioned to the applicant for amendment. (*a*) An unstamped copy must accompany the notice of opposition for transmission to the applicant for amendment, (*b*) to whom the Comptroller is required to give notice of the opposition. (*c*)

Evidence on the Application and Opposition.—The evidence in support of the opposition is transmitted to the Comptroller in the form of statutory declarations. The opponent has a period extending to fourteen days after the expiration of one month from the first advertisement of the application to amend, within which he may leave at the Patent Office statutory declarations in support of his opposition. A list of these declarations must at the same time be delivered to the applicant. (*d*)

The applicant has fourteen days from the delivery of this list within which to leave at the Patent Office his statutory declarations in answer, together with a list thereof for the opponent. A further

(*s*) Patents Act, 1883, s. 18 (1); P. R. rule 52.

(*t*) *Ashworth*, Griff. A. P. C. 6.

(*u*) P. R. rule 16A.

(*v*) Sect. 18 (1) P. R. rule 52.

(*w*) Sect. 18 (2) P. R. rule 52.

(*x*) *Ashworth*, Griff. A. P. C. 6.

(*y*) Sect. 18 (2).

(*z*) P. R. rule 53.

(*a*) *Re Codd*, Griff. P. C. 305.

(*b*) P. R. rule 54.

(*c*) Patents Act, 1883, s. 18 (3).

(*d*) P. R. rule 55.

period of fourteen days is allowed the opponent to deliver declarations in reply. Declarations in reply must, however, be confined strictly to matters in reply only. (e) A list of these must likewise be delivered to the applicant. Copies of declarations delivered may be obtained either at the Patent Office or from the opposite party. (f)

Neither side may leave further evidence except by permission of the Comptroller. This permission will only be given upon the written consent of the parties or by special leave on application in writing made for the purpose. (g) Either party applying to the Comptroller for special leave must give notice to the opposite party, who may oppose the application. (h)

Hearing before the Comptroller.—On the completion of the evidence, or at such other time as he may see fit, the Comptroller must appoint a time for the hearing of the case, giving the parties at least ten days' notice. (i) It is not necessary that the parties should attend before the Comptroller, but if either side wish to do so, they must send in an application to be heard on the prescribed form. Otherwise the Comptroller may refuse to hear them. (j)

The Comptroller (unlike the Law Officer) has no power either to summon witnesses or to hear evidence *vivâ voce*. He must decide the case upon the declarations. If, therefore, he finds that the application and opposition raise a direct issue of fact, he will probably allow the amendment, and leave the opponents to their remedy by way of appeal to the Law Officer, before whom the respective declarants can be summoned and cross-examined, so as to test on which side the truth lies. (k)

If the parties do not desire to attend before the Comptroller, he will decide the case upon the filed declarations. (l) Whether parties elect to attend or not, the decision of the Comptroller is usually notified to them in writing.

When leave to amend is given, the applicant must leave at the Patent Office, if required to do so, and within such time as shall be fixed by the Comptroller, a new specification and drawings (if any) as amended. (m)

Every amendment of a specification is advertised in the official

(e) P. R. rules 56 & 38.

(f) Ibid. 56, 39.

(g) Ibid. 56, 40.

(h) Ibid. 40, 56.

(i) Ibid. 56.

(j) P. R. rules 44, 56.

(k) See *Hatfield's Patent*, Griff. 288.

(l) P. R. rules 44, 56.

(m) P. R. rule 57. As to form of specification see P. R. rules 10, 30, 31; and examples Appendix IV. post.

journal of the Patent Office, and otherwise, as the Comptroller may direct. (*n*)

The Comptroller is not bound merely to permit or refuse an amendment, he may impose conditions, (*o*) but he has no power to give costs. (*p*) He may not, therefore, impose a condition that a sum of money shall be paid by the applicant to the opponent if such sum is really intended to recoup the opponent his expenses of opposing. (*q*)

Appeal to Law Officer.—From the Comptroller an appeal lies to the Law Officer, whose decision is final. (*r*) Any person intending to appeal must file a notice of his appeal in the Patent Office within fourteen days of the date of the decision it is intended to question. (*s*) The time for serving such notice, where the specific terms of an amendment which has been allowed are not settled at the hearing before the Comptroller, runs from the day on which the Comptroller forwards to the parties a copy of the amendment as officially approved. (*t*) The notice of appeal must state the nature of the decision appealed against, and whether the appeal is from the whole, or part only, and what part. (*u*) A copy of this notice must be sent to the Law Officer's clerk at the Royal Courts of Justice, and to the applicant or person opposing before the Comptroller, as the case may be. (*v*)

No appeal will be entertained of which notice has not been given within fourteen days, or such further time as the Comptroller has allowed, except upon special leave obtained on application to the Law Officer. (*w*)

Upon notice of the appeal being filed, the Comptroller transmits to the Law Officer's clerk all the papers relating to the matter under appeal. (*x*)

Seven days' notice at least of the time and place appointed for hearing the appeal is given by the Law Officer's clerk. But in special cases the Law Officer may direct a shorter notice to be given. (*y*) This notice is given to the Comptroller and the appellant, and to any person opposing before the Comptroller. (*z*)

At the hearing of the appeal the Law Officer will hear the applicant for amendment, and any person who has given notice of

(*n*) P. R. rule 59.

(*o*) *Hearson's Patent*, Griff. P. C. 310.

(*p*) *Chandler's Patent*, Griff. 273.

(*q*) *Pietschmann's Patent*, Griff. P. C. 307; overruling *re Codd*, *ibid.* 305.

(*r*) Patents Act, 1883, s. 18 (3).

(*s*) L. O. R. rule 1.

(*t*) *Chandler's Patent*, Griff. P. C. 273.

(*u*) L. O. R. rule 2.

(*v*) *Ibid.* 3.

(*w*) *Ibid.* 5.

(*x*) *Ibid.* 4.

(*y*) *Ibid.* 6.

(*z*) *Ibid.* 7.

opposition before the Comptroller, and who is, in the opinion of the Law Officer, a person entitled to be heard in opposition. (a) In *Bell's Application*, (b) the opponents urged that the amendment asked would make the invention the same as that already patented by two prior patents. Neither of these prior patents, however, belonged to the opponents, and Clarke, S.G., declined to admit the objection, holding that as to these prior patents those opponents were, under the circumstances, not persons entitled to be heard. Once, however, an opponent has a *locus standi* as a person entitled to oppose, he may rely upon specifications other than those in which he is personally interested. (c)

Hearing of the Appeal.—The appeal is by way of re-hearing, and except as to matters which have come to their knowledge since the decision appealed from, the parties are limited to the same evidence as was tendered below. (d) The Law Officer may, however, relax this rule, and admit further evidence on special application made to him for that purpose. In *Hampton & Facer*, (e) the decision of the Comptroller was adverse to the applicant for amendment on one point, in regard to which there was no evidence before the Comptroller; the applicant nevertheless accepted the decision *in toto*. The opponent, however, appealed, and thereupon the applicant applied to the Law Officer for leave to file further evidence upon the point on which the decision below had been given against him. Sir E. Clarke, S.G., in the circumstances, refused leave.

The Law Officer must, if either party so request, order the attendance at the hearing for cross-examination of any person who has made a declaration on the matter of the appeal, unless he is satisfied that no good ground for making such order exists. (f) Where either party desires the attendance of declarants for cross-examination, he should give notice of his request to the Law Officer's clerk, with a list of the witnesses to be examined. Copies of the notice and list should also be sent to the other side. Thereupon the parties attend before the Law Officer, who decides whether or not he will direct his clerk to issue summonses to the witnesses in question. (g) The person requiring the attendance of a witness so summoned must tender to such witness a reasonable sum for conduct money. (h)

(a) Patents Act, 1883, s. 18 (4).

(b) Griff. A. P. C. 12.

(c) *Stewart's Application*, 13 R. P. C.
628.

(d) L. O. R. rule 8.

(e) Griff. A. P. C. 14.

(f) L. O. R. rule 9.

(g) Griff. 319, n.

(h) L. O. R. rule 10.