

A
COLLECTION
OF
THE MOST IMPORTANT CASES
RESPECTING
PATENTS OF INVENTION,
&c. &c.

Jan 1

A
COLLECTION
OF
THE MOST IMPORTANT CASES
RESPECTING
PATENTS OF INVENTION
AND

The Rights of Inventors,

WHICH
Law Office
HAVE BEEN DETERMINED IN THE COURSE OF LAW SINCE
THE STATUTE FOR ABOLISHING MONOPOLIES.

TO WHICH ARE ADDED,

SOME PRACTICAL OBSERVATIONS

RESULTING FROM

THE DECISIONS ON THE SEVERAL CASES.

10

BY JOHN DAVIES,
OF THE ROLLS CHAPEL OFFICE.

LONDON:

PRINTED FOR W. REED, LAW BOOKSELLER,
17, FLEET-STREET.

1816.

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**T. DAVISON, Lombard-street,
Whitefriars, London.**

P R E F A C E.

THE collector of these cases having been upwards of thirty years in the office of the Rolls Chapel, has frequently had his attention drawn to patents and specifications of inventions, that being one of the offices in which such specifications are enrolled; and having for many years been concerned for inventors, in soliciting patents for their inventions, he has consequently been led to think much upon the subject, and has felt great surprise, and regret, that no book of the kind, now proposed, has ever been produced by any gentleman versed in this sort of business, and competent to the work.

He has mentioned his plan to several gentlemen in the profession of the law, to others,

who, like himself, are employed as agents for procuring patents, and also, to some scientific and mechanical persons, who have uniformly approved of the idea; and spoken in the strongest terms, both of the necessity and utility of such a work as is now offered to the public.

He has, it is true, in some degree, been anticipated by Mr. Collier's "Essay on the Law of Patents for Inventions," and by Mr. Hands's book on "The Law and Practice of Patents for Inventions;" but as appears to the compiler and those whose opinion he has been favoured with upon the subject, not in such a manner as to preclude the necessity of the present undertaking, as they are neither of them regular reports of cases, shewing the arguments of counsel, and giving the *dicta* of the judges settling the various points; besides which, one has given much extraneous matter, and the other is almost exclusively confined to forms, with many of which the patentee or his agent has nothing to do, it being the duty of the officers in the offices through which the patent passes in

its progress, to draw most of the instruments there given.

Those books, however, are now nearly, if not quite out of print, having met with a very rapid sale, from the want experienced not only by patentees, but by the profession, of a work which would bring the whole of the law of patents into one point of view; the compiler, therefore, is induced to offer the present collection to the public, not from any confidence in his superior qualifications for such an undertaking, as he is aware that the only merit he can claim is that of diligence in collecting the materials. A great deal of laborious research, and he hopes due diligence, has been given, in collecting from various sources, what appeared to him to be the most important decisions upon the subject, and he takes this opportunity of expressing his grateful thanks to those gentlemen of the profession who have kindly furnished him with the papers in many of the cases here reported, which he had no means of bringing before the public without their liberal assistance; but still many cases may,

and certainly do remain, of which no report is given, and which the parties interested may consider as important as those included in this work. To such he has only to observe, that he has inserted every case he has been able to procure, which contained any new points respecting patents, or which had acquired notoriety by the magnitude and importance of the invention; but if his labours should be so well received as to require a second edition, he respectfully solicits the communication of papers in any causes which may be omitted in this collection; and he will, with thankfulness to the communicator, insert a report of any important or new decision in a future edition, or should he be furnished with sufficient matter, he intends to lay it before the public in a supplemental volume, so that the purchasers of the present edition need not incur any more expense than necessarily arises by the increased bulk of the work, or be under the necessity of purchasing the second edition. Some cases might perhaps have been added from the Chancery reports, and it may be

thought an error of judgment to have wholly omitted them, but they would have swelled the size of the book beyond his wish, and as most, if not all of them, have been referred to the courts of law, it is hoped that every requisite information upon the subject will be obtained by confining the work to decisions in those courts; besides which, the Court of Chancery never decides upon the validity of a patent, the practice there being nothing more than to grant an injunction, at the prayer of the patentee, against any person infringing his patent, and to order an account of profits; but if any question arises upon the validity of the patent, the novelty of the invention, or the sufficiency of the specification, it is uniformly referred to a court of law.

*Rolls Chapel Office,
August, 1816.*

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ERRATA.

Page 235, line 5, for *in* effect, read *an* effect.

Page 352, lines 5 and 8, for *Mr. Cunden*, read *Mr. Crunden*.

INTRODUCTION.

*Respecting Monopolies, and the History of Patents
for Inventions.*

THE system of monopoly as exercised prior to the statute of 21 Ja. I. cap. 3, was not only a means of rewarding favourites of the Crown, and faithful servants of the public; but had also become a source of revenue to the Crown, arising from the rents sometimes reserved by the Letters Patent granting monopolies to individuals and companies, who, by having the sole privilege of making or vending any article granted to them, were enabled to obtain great advantage to themselves, and such monopolies by their abuse had become a serious grievance to the public.

These monopolies have been at various times the ground of complaint on the part of the public; and great inconvenience having been experienced from them, Queen Elizabeth, in order to prevent an act being brought into Parliament for that purpose, called in some of the most offensive grants. But the principle of granting such exclusive privileges, although perhaps in a limited degree, still continued in use until near the end of the reign of King James the First, notwithstanding that monarch, soon after his coming to

the crown, had declared himself an enemy to them. The House of Commons however, at this period, gave great attention to the subject, and after much investigation, and many complaints of this and other abuses of the Prerogative, a bill passed that house in the 19th year of this reign, for the purpose of restraining monopolies, and which bill was ordered to be carried to the Lords with a special recommendation; but it was by them rejected.

In the Parliament which met 10th Feb. 21 Ja. I. the Commons, profiting by the union which for a short time seemed to subsist between the King and his new Parliament, lost no time in bringing in another bill for restraining monopolies, the former bill having been, as Hume says, "encouraged by the King, but had failed by the rupture between him and the Commons:" for although the King was stated to have recalled all Patents of Monopoly, yet the Commons were not satisfied without a declaratory law against them. But it does not appear that the King really intended to put an end to grants of this description, if the act had not passed; as many grants are recorded in this very year, and during the progress of the bill, of sole privilege for twenty-one years and other terms, not only for new inventions, but for matters which are not stated in the grants to be new inventions; some of them reserving rents to the Crown, and one in particular, extending the privilege to Scotland and Ireland; a practice not in use at the present day, as Patents of Invention for each of the three parts of the United Kingdom now pass under distinct seals.

The act was made a declaratory, rather than an enacting statute, as monopolies had at all times been considered contrary to the ancient and fundamental laws of the realm, as well as to Magna Charta; and many had, at different times previous to the passing of this act, been set aside in the courts upon those grounds. They were also found by experience to be very prejudicial to an extension of commerce.

This bill was read a first time in the House of Commons, on the 24th Feb. and passed that house on the 13th March; when it was ordered "to be carried up to the House of Lords alone, by Mr. Glanville well attended, with a special recommendation from the House of Commons of the good attention thereof to it."

The fate of this bill was more fortunate than that of its precursor; as, after much consideration and delay, and several amendments by the Lords, and some conferences between them and the Commons, it passed the Upper House, and having received the Royal Assent on the 2d Nov. 1624, 22 Jac. I. became the law of the land, upon which all subsequent patents for the sole use of inventions are grounded, and from this period our present law of patents may properly be said to commence.

It is not the object of this work to make a display of learning, by defining the word "Monopoly;" or to give an account of the different monopolies which have been practised in Greece and elsewhere, or even in England, prior to the Statute of James, or to give the opinion of Gro-

tius, or other learned authors of antiquity upon the subject, as hath been done by the late essayist "on the Law of Patents for new Inventions." Suffice it to say, that Sir Edward Coke, in his § Inst. 181, gives the following definition of a monopoly.—"A monopoly is an institution or allowance by the King, by his grant, commission, or otherwise, to any person or persons, bodies politic or corporate, of or for the sole buying, selling, making, working, or using of any thing, whereby any person or persons, bodies politic or corporate, are sought to be restrained of any freedom or liberty that they had before, or hindered in their lawful trade;" which definition was certainly correct, according to the practice before the passing of the statute now in force upon that subject: but a more just definition of the word, according to the present state of the law, is given by Hawkins, in his Pleas of the Crown, I. 470, where he says, "A monopoly is an allowance by the King to any person, for the sole making, selling, &c. any thing, so that no person be restrained in what he had before, or in using his lawful trade."

The principle of the kind of monopolies under consideration, namely Patents for Inventions, is now pretty well understood; and it is generally allowed, that though it would be infinitely mischievous to the public, if useful discoveries were to be for ever locked up and made the property of private individuals, yet it is equally useful to the public, that the first inventor of such useful discoveries should have the benefit of them for a

limited time ; for it is plain, that the public would have no benefit, that there could be no improvement in the manufactures of the country, unless the labour, the time, and the expense of ingenious men were applied to the purpose of new discoveries and improvements.

It is well known that the most useful discoveries that have been made in the arts and manufactures of the country have not been made by speculative and recluse philosophers in their closets ; but by ingenious mechanics, practically acquainted with the subject matter of these discoveries. It therefore follows, that those persons whose only means of getting their subsistence is by the exercise of their own labour, skill, and ingenuity, must necessarily be prompted by an expectation of advantage to themselves, to spend much time and labour, and incur the expense of experiments in stepping out of the beaten track, and endeavouring to bring forward any great or essential improvement in the branch in which they are concerned. Such improvements frequently require not only ingenuity, but much thought, long attention, great labour, and repeated experiments ; not only requiring labour, but attended with considerable expense. It could not therefore be expected, that the most ingenious men of this description should sacrifice their time and labour in seeking improvements which, although of great benefit to their country, would be ruinous to themselves, unless some mode was devised to secure to them an advantage from their invention.

The most fair and equitable mode for doing this seems to be that which the statute of 21 Jac. has provided, which enables the Crown to secure to the inventor of any new and useful discovery, the exclusive benefit and profit of it for a limited time. It is fair and equitable for this plain reason, because if the invention is of no use, or has no ingenuity, and produces no beneficial effect, the exclusive enjoyment of it will produce no profit to the inventor. On the contrary, if it is of great ingenuity, and a considerable improvement to manufactures, and benefit to the public; the exclusive profit for the time limited will be of consequence to the inventor; and therefore this mode of encouraging ingenuity seems calculated to produce its effect, without violating any principle of commerce or of justice; because the reward is exactly proportioned to the merit and utility of the invention: the more meritorious and beneficial to the public any discovery will be when laid open, the more beneficial it is likely to be to the inventor while he has the exclusive enjoyment of it. It takes nothing from the public of which they were before in possession; while it tends greatly to promote the general interest of the community. The justice and equity of such monopolies cannot therefore surely be disputed, and still less their utility.

Many instances might be adduced to prove that, without the hope of such reward, ingenious persons would not sacrifice their time and property in bringing their ideas into practical use; but it will be sufficient to mention the very im-

portant improvements of Mr. Watt upon the steam-engine, who devoted many years, and spent a very considerable sum of money in making experiments before he could effect his object, which it is not in the nature of things to suppose he would have done, if he was not to have an exclusive privilege so as to prevent the world at large from availing themselves of his skill, labour, and expense, the moment he had brought his invention to maturity. But it is unnecessary to say any thing more in defence of the restricted monopoly now in use under this statute; as, however odious in former times such monopolies were looked upon, and which, indeed, when carried to the extent they were previous to the statute, were extremely pernicious to the public weal; they are now become very advantageous to the commercial prosperity of the country, and manufacturers and others are not only not ashamed, but even proud of having their manufactures and inventions called "Patent," and themselves styled "Patentees."

In order that the law of patents, and the foundation and meaning of such grants may be clearly understood, and the whole law upon the subject brought into one point of view, it has been thought proper to give, at the end of this introductory chapter, the declaratory statute by which the law of patents of invention is now determined, and upon which alone they rest; and there might also have been added, the explication of the more material parts of it, by that great luminary of the law, Sir Edward Coke; in whose time, and with whose assistance (he having been chairman of the com-

mittee to whom the bill was referred), this act was framed and passed (and who of course must have been fully competent to explain the meaning and intent of it), as given in 3 Inst. 182; but as his comment relates mostly to the parts of the act with which we have at present nothing to do, it is omitted.

There is also added, the form of letters patent for inventions, as now in use; although, it may be observed, that the powers and provisos contained in these patents have varied from time to time, agreeably to the suggestions of the Attorney or Solicitor General for the time being, whose duty it is to draw these instruments, and who, by the King's warrant, is directed "to insert therein all such clauses, prohibitions, and provisos, as are usual and necessary in grants of the like nature, and as he shall judge requisite."

The most material alteration that has taken place in these grants, is the addition of the proviso for enrolling a specification within a given time; which was not introduced into these letters patent until near the end of Queen Anne's reign; although we find that proviso spoken of in the arguments in some of the following cases, as a *legislative* measure; but no provision whatever is made in the act, for enrolling any description which should enable the public to practise the invention at the end of the monopoly granted to the patentee.

There was, indeed, a sort of specification generally contained in the patent, which must have been given in the petition praying for the exclu-

sive privilege ; but it was not such a specification as is now requisite, and which would enable the public to manufacture the article when the patent-right had expired ; and there was no clause or proviso inserted in the patents that if the description given therein should be insufficient for that purpose, the patent should be void ; consequently the world was entirely dependent upon the fidelity, and it may be said in many cases, the generosity of the patentee, whether the invention should become public at the end of his term or not, as it is evident that many very important inventions, without a proper and sufficient specification for the benefit of the public, might still be withheld from the world as to their public use and exercise.

Hence, no doubt, and either from the conviction and experience that fraud and concealment had been made use of by patentees, in order to keep their inventions from being brought into public use upon the expiration of their patents, or perhaps from its having been discovered that it was unsafe for the inventors to give a full description of their inventions before their patents had passed the Great Seal (as their privilege only commences at that period, and if by any means, however fraudulent, the invention should previously have been made public, the patent would be void), the law officers of the Crown found it expedient, and even necessary, both for the advantage of the public and the patentee, to introduce this proviso.

The time allowed for enrolling the specification was varied at different periods, having at

first usually been four months from the day of the date of the letters patent; but when the late Lord Alvanley was Attorney General, he reduced the time to one month, under the idea, it is presumed, that the invention should be perfected without further experiments before the patent was obtained, and that one month was amply sufficient to put the specification in due form; but the time given for this purpose has lately been extended to two months, probably on account of the difficulty of drawing such a specification in matters of great importance as shall enable a patentee to support his patent if brought into a court of law, as most of the actions upon patents have turned upon the insufficiency of the specification.

This time however is sometimes enlarged to such longer period as may be thought proper by the Attorney or Solicitor General, according to the circumstances of the case, upon a request to him at the time he is applied to for his report upon the petition for a patent, particularly if the inventor in his affidavit of his invention makes oath that it is his intent to apply for patents for Scotland and Ireland; in which case it is usual to allow six months, as patents take longer time to be completed in those countries than in England; and if the specification was enrolled here within the usual time, the invention might perhaps be brought into public use in those countries before such patents had passed the respective seals, whereby the inventor would lose the benefit of them. But it should be observed, that if the application is

not made at the time beforementioned, and an order procured accordingly, the King's warrant will be made out with the proviso for enrolling a specification in the usual time, and it will then be too late to have the time enlarged without incurring the expense and loss of time (which is often a greater object with inventors than the expense) of beginning the process of soliciting the patent *de novo*, as the Lord Chancellor himself has not the power of dispensing with the proviso, or enlarging the time limited for enrolling the specification, if the patent has passed the great seal.

In the case, *ex parte Koops*, 6 Ves. 599, 22d Jan. 1802, a petition was presented by the patentee of an invention of making paper of straw, and the object of it was, that the Lord Chancellor would dispense with the enrolment, or that some precautions should be taken to prevent the specification from being made public, suggesting the danger that foreigners might obtain copies of the specification in consequence of such enrolment.

Lord Eldon, C., "How can I do this? Either upon this or some other case in the last session a clause for this purpose was inserted in an act of parliament; and upon the motion of Lord Thurlow, upon reasons applying not only to that but to all cases, and seconded by Lord Rosslyn, the clause was universally rejected, and rejected, as it appears to me, upon very substantial grounds, in which I readily concur. As to the worth of the apprehension suggested, a man has nothing

more to do than to pirate your invention in a single instance, and he will then force you to bring an action, and then the specification must be produced.

“But with regard to the King’s subjects a very strong objection occurs, which makes it necessary that the specification should be capable of being produced. They have a right to apply to the Office to see the specification, that they may not throw away their time and labour, perhaps at a great expense, upon an invention, upon which the patentee might afterwards come with his specification, alleging an infringement of his patent, when if those persons had seen the specification, they never would have engaged in their project. The enrolment is therefore for the benefit of the public.”

It was then desired that the time, which would expire on the 17th of the next month, might be enlarged, in order that the petitioner might apply to parliament.

Lord Eldon, C. “I cannot do that if the patent has passed; for the patent is void, if the proviso is not complied with. You should have applied to the Attorney General before the patent passed, for a longer time upon the special circumstances. I cannot take the Great Seal from a patent, and repeal it in the most essential point: it is a legal grant, with a proviso for the benefit of all the King’s subjects. You can do nothing, except by an act of parliament to enlarge the time mentioned in the proviso.”

The petition was dismissed.

It may, perhaps, upon a first view, excite some surprise on referring to the cases hereafter given, that although the statute upon which the legality of these patents is founded, passed at so early a period as the reign of King James the first, yet the decisions (with the single exception of the first case) are all of so recent a date as the present reign; and the compiler fears he may, on that account, be accused of professing more than he has performed, or of want of due diligence in searching for cases; in answer to which he has only to refer to the following expression of one whose diligence and knowledge will not, he is very confident, be disputed, viz. the late Lord Chief Justice of the Court of Common Pleas, Sir James Eyre, who, so recently as the 16th May, 1795, in the case of *Boulton v. Bull*, after stating that patent-rights are no where accurately discussed in our books, said, that “the case of *Edgeberry v. Stephens* is almost the only case upon the patent-right under the saving of the statute of James the first that is to be found.” Under the sanction of so high an authority, it might have been deemed unnecessary to make much research into the old books, in full confidence that it would be totally useless; such research has, however, been made through the books of reports subsequent to James the first, and, as might have been predicted, without finding any other important cases upon patent-rights than those which are hereafter given. But when it is considered that these grants were not so much in use in former periods as they have been

of late years, sometimes not more than eight or ten, and frequently not so many, having passed in a year, although at present there are seldom so few as one hundred; it is by no means surprising that more subjects of litigation should arise now than in former times. Whether the great increase in the number of patents in the present age has arisen from the increased ingenuity, or from the greater spirit of speculation of our cotemporaries, or from what other cause, is not for us to inquire, but such is the fact.

Another reason why so few cases upon this subject are reported is, that many, or perhaps most of the trials upon this subject, have been at *Nisi prius*, and therefore it has not been practicable to give so many of those decisions as could have been wished; the books in general only having those cases which have come before the Court upon motions for new trial, upon cases reserved at *Nisi prius* for the opinion of the Court or some other reason, making it necessary to be heard in full Bench. Some instances, however, which appeared important, have been reduced into the form of reports from papers obligingly furnished by gentlemen of the profession who were concerned in the causes; and as all the points of law which were considered as settled, are given either in the arguments of counsel, or the opinions of the judges in the cases reported in this work, particularly in the elaborate reports of the cases of *Boulton v. Bull*, and *Hornblower v. Boulton*, which occupied so much of the time of the Courts of King's Bench and Common Pleas, it is hoped

that all the decided points respecting patents of invention and the rights of patentees, will be by this work brought at once before the public.

It may, however, be proper to observe, for the information of those not acquainted with law proceedings, that a cause tried at *Nisi prius* is not in itself final, although the parties frequently think it advisable, from the nature of the evidence adduced upon the trial, to acquiesce in the verdict of the jury; but it is still competent to them to move for a new trial; or other parties, upon a similar case arising, may think proper to resort to the court. Yet it seldom happens that when parties to a suit have acquiesced in a verdict at *Nisi prius*, other parties will think it expedient to bring the same point before the court; and therefore, under such circumstances, the point in question may be considered as established.

The statute of 21 Jac. limiting the power of the Crown to grant these monopolies for any term exceeding fourteen years, no extension can be obtained by any authority short of an act of parliament; and it was at one time intended to give in this work a list of all the acts which had passed for that or other purposes connected with patents of invention, but upon further consideration it has been thought unnecessary to increase the size of the work by inserting matter, which although not absolutely foreign to the subject, would not give any elucidation of the law relating to it. It has been thought equally unnecessary to follow the example of the author of "a Treatise upon the Law and Practice of Patents for Inventions,"

by giving the form of the report, warrant, bill, and other proceedings in the progress of passing a patent, which are prepared officially; and it has also been considered not only inexpedient, but as tending rather to deceive than to afford information, to give the form of a specification, as hath been done by the gentlemen who have before treated upon this subject, that instrument being of too much importance to be considered as a mere matter of form, the validity of the patent depending in a very great degree upon its accuracy and sufficiency.

21 JA. I. c. 3.

*An Act concerning Monopolies and Dispensations
with Penal Laws, and the Forfeitures thereof.*

FORASMUCH as your Most Excellent Majesty, in your royal judgment, and of your blessed disposition to the weal and quiet of your subjects, did, in the year of our Lord God one thousand six hundred and ten, publish in print to the whole realm, and to all posterity, that all grants of monopolies, and of the benefit of any penal laws, or of power to dispense with the law, or to compound for the forfeiture, are contrary to your Majesty's laws, which your Majesty's declaration is truly consonant and agreeable to the ancient and fundamental laws of this your realm: And whereas your Majesty was further graciously pleased expressly to command that no suitor should presume to move your Majesty for matters of that nature; yet nevertheless upon misinformations and untrue pretences of public good, many such grants have been unduly obtained, and unlawfully put in execution, to the great grievance and inconvenience of your Majesty's subjects, contrary to the laws of this your realm, and contrary to your Majesty's royal and blessed intention so published as aforesaid. For avoiding whereof, and preventing of the like in time to come, May it

please your most Excellent Majesty, at the humble suit of the Lords Spiritual and Temporal, and the Commons, in this present parliament assembled, that it may be declared and enacted, And be it declared and enacted by the authority of this present parliament, that all monopolies and all commissions, grants, licences, charters, and letters patents heretofore made or granted, or hereafter to be made or granted to any person or persons, bodies politic or corporate whatsoever, of or for the sole buying, selling, making, working, or using of any thing within this realm or the dominion of Wales, or of any other monopolies, or of power, liberty, or faculty to dispense with any others, or to give licence or toleration to do, use, or exercise any thing against the tenor or purport of any law or statute, or to give or make any warrant for any such dispensation, licence, or toleration to be had or made; or to agree or compound with any others for any penalty or forfeitures limited by any statute; or of any grant or promise of the benefit, profit, or commodity of any forfeiture, penalty, or sum of money, that is or shall be due by any statute, before judgment thereupon had; and all proclamations, inhibitions, restraints, warrants of assistance, and all other matters and things whatsoever any way tending to the instituting, erecting, strengthening, furthering, or countenancing of the same, or any of them, are altogether contrary to the laws of this realm, and so are and shall be utterly void and of none effect, and in no wise to be put in ure or execution.

II. And be it further declared and enacted by the authority aforesaid, that all monopolies, and all such commissions, grants, licences, charters, letters patents, proclamations, inhibitions, restraints, warrants of assistance, and all other matters and things tending as aforesaid, and the force and validity of them and of every of them, ought to be and shall be for ever hereafter examined, heard, tried and determined, by and according to the common laws of this realm, and not otherwise.

III. And be it further enacted by the authority aforesaid, that all person and persons, bodies politic and corporate whatsoever, which now are or hereafter shall be, shall stand and be disabled and incapable to have, use, exercise, or put in ure any monopoly, or any such commission, grant, licence, charter, letters patents, proclamation, inhibition, restraint, warrant of assistance, or other matter or thing tending as aforesaid, or any liberty, power, or faculty, grounded or pretended to be grounded upon them or any of them.

IV. And be it further enacted by the authority aforesaid, that if any person or persons, at any time after the end of forty days next after the end of this present session of parliament, shall be hindered, grieved, disturbed or disquieted, or his or their goods or chattels any way seized, attached, distrained, taken, carried away or detained, by occasion or pretext of any monopoly, or of any such commission, grant, licence, power, liberty, faculty, letters patents, proclamation, inhibition, restraint, warrant of assistance or other matter or

thing tending as aforesaid, and will sue to be relieved in or for any of the premises; that then, and in every such case, the same person and persons shall and may have his and their remedy for the same at the common law, by any action or actions to be grounded upon this statute; the same action and actions to be heard and determined in the courts of King's Bench, Common Pleas, and Exchequer, in any of them, against him or them, by whom he or they shall be so hindered, grieved, disturbed, or disquieted, or against him or them, by whom his or their goods or chattels shall be so seized, attached, distrained, taken, carried away, or detained; wherein all and every such person and persons, which shall be so hindered, grieved, disturbed or disquieted, or whose goods or chattels shall be so seized, attached, distrained, taken, carried away, or detained, shall recover three times so much as the damages which he or they sustained by means or occasion of being so hindered, grieved, disturbed, or disquieted, or by means of having his or their goods or chattels seized, attached, distrained, taken, carried away, or detained, and double costs; and in such suits, or for the staying or delaying thereof, no essoin, protection, wager of law, aid, prayer, privilege, injunction, or order of restraint, shall be in any wise prayed, granted, admitted, or allowed, nor any more than one imparlance: And if any person or persons shall, after notice given, that the action depending is grounded upon this statute, cause or procure any action at the common law grounded upon this sta-

tute, to be stayed or delayed before judgment, by colour or means of any order, warrant, power or authority, save only of the court wherein such actions as aforesaid shall be brought and depending, or after judgment had upon such action, shall cause or procure the execution of or upon any such judgment to be stayed or delayed by colour or means of any such order, warrant, power, or authority, save only by writ of error or attaint; that then the said person and persons so offending, shall incur and sustain the pains, penalties and forfeitures ordained and provided by the statute of provision and præmunire made in the sixteenth year of the reign of King Richard the Second.

V. Provided nevertheless, and be it declared and enacted, that any declaration before-mentioned shall not extend to any letters patents and grants of privilege for the term of one and twenty years or under, heretofore made, of the sole working or making of any manner of new manufacture, within this realm, to the first and true inventor or inventors of such manufactures, which others at the time of the making of such letters patents and grants did not use, so they be not contrary to the law, nor mischievous to the state, by raising of prices of commodities at home, or hurt of trade, or generally inconvenient, but that the same shall be of such force as they were or should be if this act had not been made, and of none other: And if the same were made for more than one and twenty years, that then the same, for the term of one and twenty years only, to be accounted

from the date of the first letters patents and grants thereof made, shall be of such force as they were or should have been if the same had been made but for the term of one and twenty years only, and as if this act had never been had or made, and of none other.

VI. Provided also, and be it declared and enacted, that any declaration before-mentioned shall not extend to any letters patents and grants of privilege for the term of fourteen years, or under, hereafter to be made, of the sole working or making of any manner of new manufacture within this realm, to the true and first inventor and inventors of such manufactures, which others at the time of making such letters patents and grants shall not use, so as also they be not contrary to the law, nor mischievous to the state, by raising prices of commodities at home or hurt of trade, or generally inconvenient. The said fourteen years to be accomplished from the date of the first letters patents or grant of such privilege hereafter to be made, but that the same shall be of such force as they should be, if this act had never been made, and of none other.

VII. Provided also, and it is hereby further intended, declared, and enacted by the authority aforesaid, that this act, or any thing therein contained, shall not, in any wise, extend, or be prejudicial to any grant, or privilege, power, or authority whatsoever, heretofore made, granted, allowed or confirmed by any act of parliament now in force, so long as the same shall so continue in force.

VIII. Provided also, that this act shall not extend to any warrant or privy seal, made or directed, or to be made or directed by his majesty, his heirs or successors, to the justices of the courts of the King's Bench or Common Pleas, and barons of the Exchequer, justices of assize, justices of oyer and terminer and gaol-delivery, justices of the peace, and other justices for the time being, having power to hear and determine offences done against any penal statute, to compound for the forfeitures of any penal statute, depending in suit and question before them, or any of them respectively, after plea pleaded by the party defendant.

IX. Provided also, and it is hereby further intended, declared, and enacted, that this act or any thing therein contained, shall not in any wise extend or be prejudicial unto the city of London, or to any city, borough, or town corporate within this realm, for or concerning any grants, charters, or letters patents, to them or any of them made or granted, or for or concerning any custom or customs used by or within them or any of them; or unto any corporations, companies, or fellowships of any art, trade, occupation or mystery, or to any companies or societies of merchants within this realm, erected for the maintenance, enlargement, or ordering of any trade of merchandize; but that the same charters, customs, corporations, companies, fellowships and societies, and their liberties, privileges, powers, and immunities, shall be and continue of such force and effect as they were before the making of this act, and of none

o'her; any thing before in this act contained to the contrary in any wise notwithstanding.

X. Provided also, and be it enacted, that this act, or any declaration, provision, disablement, penalty, forfeiture, or other thing before-mentioned, shall not extend to any letters patents or grants of privilege heretofore made, or hereafter to be made, of, for, or concerning printing; nor to any commission, grant, or letters patents heretofore made, or hereafter to be made, of, for, or concerning the digging, making, or compounding of saltpetre or gunpowder, or the casting or making of ordnance, or shot for ordnance, nor to any grant or letters patents heretofore made, or hereafter to be made, of any office or offices heretofore erected, made, or ordained and now in being, and put in execution, other than such offices as have been decried by any his majesty's proclamation or proclamations: but that all and every the same grants, commissions, and letters patents, and all other matters and things tending to the maintaining, strengthening, or furtherance of the same, or any of them, shall be and remain of the like force and effect, and no other, and as free from the declarations, provisions, penalties, and forfeitures contained in this act, as if this act had never been had nor made, and not otherwise.

XI. Provided also, and be it enacted, that this act, or any declaration, provision, disablement, penalty, forfeiture, or other thing before-mentioned, shall not extend to any commission, grant,

letters patents, or privilege heretofore made, or hereafter to be made, of, for, or concerning the digging, compounding, or making of alum, or alum-mines; but that all and every the same commissions, grants, letters patents, and privileges, shall be and remain of the like force and effect, and no other, and as free from the declarations, provisions, penalties, and forfeitures contained in this act, as if this act had never been had nor made, and not otherwise.

XII. Provided also, and be it enacted, that this act; or any declaration, provision, penalty, forfeiture, or other thing before-mentioned, shall not extend or be prejudicial to any use, custom, prescription, franchise, freedom, jurisdiction, immunity, liberty, or privilege heretofore claimed, used, or enjoyed by the governors and stewards and brethren of the fellowship of the hoast-men of the town of Newcastle upon Tyne, or by the ancient fellowship, guild, or fraternity, commonly called hoast-men, for or concerning the selling, carrying, lading, disposing, shipping, venting, or trading of or for any sea-coals, stone-coals, or pit coals, forth or out of the haven and river of Tyne, or to a grant made by the said governor and stewards and brethren of the fellowship of the said hoast-men to the late queen Elizabeth, of any duty or sum of money to be paid for, or in respect of any such coals as aforesaid; nor to any grants, letters patents, or commission, heretofore granted or hereafter to be granted, of, for, or concerning the licensing of the keeping of any tavern or taverns; or selling, uttering, or retailing of wines

to be drunk or spent in the mansion-house, or houses, or other place in the tenure or occupation of the party or parties so selling or uttering the same; or for or concerning the making of any compositions for such licences, so as the benefit of such compositions be reserved and applied to and for the use of his majesty, his heirs or successors, and not to the private use of any person or persons.

XIII. Provided also, and be it enacted, that this act, or any declaration, provision, penalty, forfeiture, or other thing before-mentioned, shall not extend or be prejudicial to a grant or privilege for or concerning the making of glass, by his majesty's letters patents under the great seal of England, bearing date the two and twentieth day of May, in the one and twentieth year of his majesty's reign of England, made and granted to Sir Robert Mansel, Knight, Vice Admiral of England: nor to a grant or letters patents, bearing date the twelfth day of June, in the thirteenth year of his majesty's reign of England, made to James Maxwell, Esquire, concerning the transportation of calves skins: but that the said several letters patents, last mentioned, shall be, and remain of the like force and effect, and as free from the declarations, provisions, penalties, and forfeitures before-mentioned, as if this act had never been had nor made, and not otherwise.

XIV. Provided also, and be it declared and enacted, that this act, or any declaration, provision, penalty, forfeiture, or other thing before-mentioned, shall not extend or be prejudicial to a

grant or privilege for or concerning the making of smalt, by his majesty's letters patents, under the great seal of England, bearing date the sixteenth day of February, in the sixteenth year of his majesty's reign of England, made or granted to Abraham Baker; nor to a grant or privilege for or concerning the melting of iron ewer, and of making the same into cast-works or bars with sea coals or pit coals, by his majesty's letters patents, under the great seal of England, bearing date the twentieth day of February, in the nineteenth year of his majesty's reign of England, made or granted to Edward Lord Dudley; but that the same several letters patents and grants shall be and remain of the like force and effect, and as free from the declarations, provisions, penalties and forfeitures before-mentioned, as if this act had never been had nor made, and not otherwise.

The Form of Letters Patent for New Inventions.

GEORGE the Third, by the Grace of God, &c. To all to whom these presents shall come greeting. Whereas A. B. of C. in the county of D. engine maker, hath by his petition humbly represented unto us, that he, after much study and expense, hath invented, &c. which the petitioner conceives will be of great public utility; that he is the first and true inventor thereof, and that the

same hath not been practised or used by any other person or persons to the best of his knowledge and belief. The petitioner therefore most humbly prayed that we would be graciously pleased to grant unto him, his executors, administrators and assigns, our royal letters patent, under the great seal of our united kingdom of Great Britain and Ireland, for the sole use, benefit, and advantage of his said invention, within that part of our united kingdom of Great Britain and Ireland, called England, our dominion of Wales, and town of Berwick-upon-Tweed, for the term of fourteen years, pursuant to the statute in that case made and provided; and we being willing to give encouragement to all arts and inventions which may be for the public good, are graciously pleased to condescend to the petitioner's request, Know ye therefore, that we, of our especial grace, certain knowledge and mere motion, Have given and granted, and by these presents for us, our heirs and successors, Do give and grant unto the said A. B. his executors, administrators and assigns, our especial licence, full power, sole privilege and authority, that he the said A. B. his executors, administrators and assigns, and every of them by himself and themselves, or by his or their deputy or deputies, servants or agents, or such others as he the said A. B. his executors, administrators and assigns, shall at any time agree with, and no others, from time to time, and at all times hereafter, during the term of years herein expressed, shall and lawfully may make, use, exercise, and vend his said invention within that part of our

united kingdom of Great Britain and Ireland, called England, our dominion of Wales, and town of Berwick-upon-Tweed, in such manner as to him the said A. B. his executors, administrators or assigns, or any of them, shall in his or their discretion seem meet. And that he the said A. B. his executors, administrators and assigns, shall and lawfully may have and enjoy the whole profit, benefit, commodity and advantage from time to time coming, growing, accruing and arising by reason of the said invention, for and during the term of years herein mentioned, *To have*, hold, exercise, and enjoy the said licence, powers, privileges, and advantages herein before granted or mentioned to be granted unto the said A. B. his executors, administrators and assigns, for and during, and unto the full end and term of fourteen years from the date of these presents next and immediately ensuing, and fully to be complete and ended according to the statute in such case made and provided. And to the end that he the said A. B. his executors, administrators and assigns, and every of them, may have and enjoy the full benefit and the sole use and exercise of the said invention, according to our gracious intention herein before declared, We do by these presents, for us our heirs and successors, require and strictly command all and every person and persons, bodies politic and corporate, and all other our subjects whatsoever, of what estate, quality, degree, name, or condition soever they be, within that said part of our united kingdom of Great Britain and Ireland, called England, our domi-

nion of Wales, and town of Berwick-upon-Tweed aforesaid, that neither they, nor any of them, at any time during the continuance of the said term of fourteen years hereby granted, either directly or indirectly, do make use or put in practice the said invention, or any part of the same so attained unto by the said A. B. as aforesaid, nor in any wise counterfeit, imitate, or resemble the same, nor shall make, or cause to be made, any addition thereunto, or subtraction from the same, whereby to pretend himself or themselves the inventor or inventors, deviser or devisors thereof, without the licence, consent, or agreement of the said A. B. his executors, administrators or assigns, in writing, under his or their hands and seals, first had and obtained in that behalf, upon such pains and penalties as can or may be justly inflicted on such offenders for their contempt of this our royal command, and further to be answerable to the said A. B. his executors, administrators and assigns, according to law for his and their damages thereby occasioned. And moreover, We do by these presents, for us, our heirs and successors, will and command all and singular the justices of the peace, mayors, sheriffs, bailiffs, constables, headboroughs, and all other officers and ministers whatsoever of us our heirs and successors for the time being, that they or any of them do not, nor shall at any time hereafter during the said term hereby granted, in any wise molest, trouble, or hinder the said A. B. his executors, administrators or assigns, or any of them, or his or their deputies, servants or agents, in or

about the due and lawful use or exercise of the aforesaid invention, or any thing relating thereto; Provided always, and these our letters patent are and shall be upon this condition, that if at any time during the said term hereby granted, it shall be made appear to us, our heirs or successors, or any six or more of our or their privy council, that this our grant is contrary to law, or prejudicial, or inconvenient to our subjects in general, or that the said invention is not a new invention as to the public use and exercise thereof in that said part of our united kingdom of Great Britain and Ireland, called England, our dominion of Wales, and town of Berwick-upon-Tweed aforesaid, or not invented and found out by the said A. B. as aforesaid, then upon signification or declaration thereof to be made by us, our heirs or successors, under our or their signet or privy seal, or by the lords and others of our or their privy council, or any six or more of them under their hands, these our letters patent shall forthwith cease, determine and be utterly void to all intents and purposes, any thing herein before contained to the contrary thereof, in any wise notwithstanding. Provided also, that these our letters patent, or any thing herein contained, shall not extend, or be construed to extend, to give privilege unto the said A. B. his executors, administrators or assigns, or any of them, to use or imitate any invention or work whatsoever, which hath heretofore been found out or invented by any other of our subjects whatsoever, and publicly used or exercised in that said part of our united kingdom of Great Britain and Ireland, called

England, our dominion of Wales, and town of Berwick-upon-Tweed aforesaid, unto whom like letters patent or privileges have been already granted for the sole use, benefit, and exercise thereof; it being our will and pleasure that the said A. B. his executors, administrators and assigns, and all and every other person and persons to whom like letters patent or privileges have been already granted as aforesaid, shall distinctly use, and practise their several inventions by them invented and found out, according to the true intent and meaning of the same respective letters patent and of these presents. Provided likewise, nevertheless, and these our letters patent are upon this express condition, that if the said A. B. his executors, or administrators, or any person or persons which shall or may at any time or times hereafter during the continuance of this grant have or claim any right, title, or interest, in law or equity, of, in or to the power, privilege or authority, of the sole use and benefit of the said invention hereby granted, shall make any transfer or assignment, or any pretended transfer or assignment of the said liberty and privilege, or any share or shares of the benefit or profit thereof, or shall declare any trust thereof, to or for any number of persons exceeding the number of five, or shall open, or cause to be opened, any book or books for public subscriptions, to be made by any number of persons exceeding the number of five, in order to the raising any sum or sums of money under pretence of carrying on the said liberty or privilege hereby granted, or shall by him or themselves, or his or their agents or servants, re-

ceive any sum of money whatsoever of any number of persons exceeding in the whole the number of five, for such or the like intents or purposes, or shall presume to act as a corporate body, or shall divide the benefit of these our letters patent, or the liberty and privileges hereby by us granted; into any number of shares exceeding the number of five, or shall commit, or do, or procure to be committed or done, any act, matter or thing whatsoever, during such time as such person or persons shall have any right or title, either in law or equity, in, or to the said premises, which will be contrary to the true intent and meaning of a certain act of parliament made in the sixth year of the reign of our late royal great grandfather King George the first, intituled "An act for the better securing certain powers and privileges intended to be granted by his Majesty by two charters for assurance of ships and merchandizes at sea, and for lending money upon bottomry, and for restraining several extravagant and unwarrantable practices therein mentioned." Or in case the said power, privilege, or authority shall at any time hereafter become vested in or in trust for more than the number of five persons, or their representatives at any one time, (reckoning executors or administrators as and for the single person whom they represent, as to such interest as they are or shall be entitled to in right of such their testator or intestate); that then and in any of the said cases; these our letters patent, and all liberties and advantages whatsoever hereby granted, shall utterly

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cease, determine, and become void, any thing herein before contained to the contrary thereof in any wise notwithstanding. Provided also, that if the said A. B. shall not particularly describe and ascertain the nature of his said invention, and in what manner the same is to be performed, by an instrument in writing under his hand and seal, and cause the same to be inrolled in our High Court of Chancery, within two calendar months next and immediately after the date of these our letters patent, that then these our letters patent, and all liberties and advantages whatsoever hereby granted, shall utterly cease, determine, and become void, any thing herein before contained to the contrary thereof in any wise notwithstanding. And lastly, we do by these presents, for us, our heirs and successors, grant unto the said A. B. his executors, administrators and assigns, that these our letters patent, or the inrolment or exemplification thereof, shall be in and by all things good, firm, valid, sufficient and effectual in the law, according to the true intent and meaning thereof, and shall be taken, construed, and adjudged in the most favourable and beneficial sense for the best advantage of the said A. B. his executors, administrators and assigns, as well in all our courts of record as elsewhere; and by all and singular the officers and ministers whatsoever of us, our heirs and successors, in that part of our united kingdom of Great Britain and Ireland called England, our dominion of Wales, and town of Berwick-upon-Tweed aforesaid, and

amongst all and every the subjects of us, our heirs and successors, whatsoever and wheresoever, notwithstanding the not full and certain describing the nature or quality of the said invention, or of the materials thereto conducing and belonging. In witness, &c.

CASES

RESPECTING

PATENTS OF INVENTION, AND THE RIGHTS
OF PATENTEES.

IN THE COURT OF KING'S BENCH.

Edgeberry v. Stephens.

S. C. Salk. 447.

A GRANT of a monopoly may be to the first inventor, by the 21 Jac. 1. and if the invention be new in England, a patent may be granted, though the thing was practised beyond the sea before; for the statute speaks of new manufactures within this realm, so that, if they be new here, it is within the statute: for the act intended to encourage new devices useful to the kingdom, and whether learned by travel or by study, it is the same thing. Agreed by Holt and Pollexfen in this case.

IN THE COURT OF COMMON PLEAS.

Arkwright v. Nightingale.

17 Feb. 1785.

THIS was an action brought for an infringement upon a patent granted to the plaintiff, for certain instruments and machines for preparing silk, cotton, flax, and wool, for spinning. The patent was dated 16 Dec. 16 Geo. 3, and the specification inrolled the 13th April following.

Mr. Serjeant Adair, for the plaintiff, said, that he was the better enabled to state the subject of the dispute between the parties, because he had been furnished with experience from a former and incomplete discussion of this question in another place, where the decision had been against the plaintiff, he having been nonsuited. The cause in the court where it was before tried, was not understood either by the court, the jury, the counsel, or the witnesses. It was no imputation upon them to say, that in that stage of the business they neither did nor could understand the real question to be tried, because the objections came by surprise upon the parties. Mr. Arkwright, relying upon his own skill, had supposed, that every lawyer must necessarily be an ingenious mechanic, but in this he was mistaken; as many are not informed of the principles of mechanics, and, if informed of the principles, they are ignorant of the practice. The ingenious and

able mechanics who were examined upon that occasion, were some of them unacquainted with the principles of the manufactory to which that machine was to be applied, and with the machines in use before Mr. Arkwright's invention; it was, therefore, inevitable, that the cause should be imperfectly understood, and imperfectly stated. This is a patent granted to Mr. Arkwright, as the inventor of certain instruments or machines (in the plural number) which would be of public utility in preparing cotton, flax, and wool for spinning. The object of these machines is distinctly described in the patent; it is not a machine for spinning any of those materials, but for preparing them for the operation of spinning. If, therefore, Mr. Arkwright has invented a way of preparing (as stated in the patent) the raw materials in a manner which shall improve our manufactures in quality, more expeditiously and with less labor, he has done an essential benefit to the public, and is entitled to derive a benefit from it himself, provided he has complied with the legal requisites; for it is necessary to secure the benefit in reversion to the public, as the law does not suffer an inventor to enjoy the benefit of an invention for any period of time, at the risque of afterwards letting the secret die with him, or wilfully concealing it; it is, therefore, required in all patents, that the nature of the invention shall be so described, as that at the expiration of the patent, other people may make use of the same thing. In what is technically called the specification, Mr. Arkwright has fully and suffi-

ciently described that invention. In all inventions, that in which this precaution is of the least importance to the public, and in which there is the least danger of an invention, once brought into use, being lost, is in the invention of new ingenious machines ; because, from the use of them, it must necessarily happen, from their being in a number of hands, that if the inventor wished to conceal them from the public, if he had been ever so artfully obscure in his specification, in order to prevent the public getting to the knowledge of them, it would not be in his power to do so ; for a machine once introduced, and in general use, can never be lost ; it must, from the use and nature of it, be known at the time the patent expires. It is not, however, contended, that a plain and intelligible specification is not in every case necessary. As to a very ingenious and complicated machine, it must be plain and intelligible to ingenious mechanics, to men informed of the effect which that machine is intended to produce, and intimately acquainted with the means used to produce similar effects before ; without these requisites, the ingenuity of man cannot make a plain and intelligible specification of a complicated machine. If an ingenious mechanic was to make a new invention in clocks or watches, it would not be incumbent upon him to make a specification intelligible to a common cobbler ; the person must be acquainted with the construction of watches in use before ; and it will be sufficient in the principles of common sense, and to satisfy the requisition of the law, if the specification is suffi-

cient to enable a skilful watchmaker, who knew nothing of the invention but from the specification, to add those improvements to the movements that were before in use. That will explain what was meant by saying, that the cause was not understood upon the former trial, because it was not then explained what the principles of the machines in use before this invention were; what effects they produced, and what defects this invention proposed to remedy, and what new effects it was to produce. When the machines that were in use before Mr. Arkwright's invention are produced and explained, it will be perfectly clear that any mechanic of common ingenuity, who was acquainted with those machines, could, from the drawing and the description, make the machine invented by Mr. Arkwright. There was another source of obscurity and mistake, which existed at the time of the former trial, which was, that after the granting of Mr. Arkwright's patent, both he himself, and those who had encroached upon the patent, had made several alterations in the form and construction of different parts of the machine, so that the model then produced, which was a direct model of the machine as then used in its improved state, exhibited an appearance not perfectly corresponding with the drawings in the specification. To explain that there will be produced a model of the machines in use before Mr. Arkwright's invention, then an application of the parts of that invention, made exactly after the description contained in the specification, and applied to the principles of the old machine,

which will shew what a workman would make from the description in the specification, and it will be proved, that that machine will produce all the effects that are required by this new invention; it will also be proved, that the machine in its improved state, with the advantage of little alterations, is substantially the same machine with all its constituent parts, worked upon the same principles, and, in fact, is only a more finished way of making the same thing, and producing the same effect; and more than one witness will be produced, who never saw a cotton-mill in their lives, who have actually made the machine from the specification alone.

The learned serjeant then desired the models to be brought into court, and explained them successively, comparing the parts with the specification, and shewing the manner in which they were applied to the old machine, and the advantages gained by the addition.

One objection taken to the specification upon the former occasion was, that it did not describe in what manner the cotton was to be taken off the cloth; but that being part of the machine before in use, it was not necessary to describe it: and the witnesses who are mechanics will say, that when they are told that No. 3. delivers its contents upon another cylinder, that that is sufficient description to any man who knew the construction of the former machine, to understand, that the rollers in the former machine must be retained in use; it therefore was perfectly intelligible to any man who had ever seen the former machine. The two rollers

are not specified: no part of the old machine need be specified. The next objection at the former trial was to the cylinder substituted in the place of the old one: the objection to that was, that if it was worked with parallel card fillets round it, the effect would be certain; being spread upon the whole of the web of cloth that discharged it on the other cylinder: there being no card in the interval between these fillets, that interval would be choaked up with cotton, so as to obstruct the moving of the machine, and, therefore, it was contended, that that description in the specification was imperfect. In answer, it is no where said, that the cotton is to be spread over the whole of the web, and if it is spread in corresponding fillets, the fillets on the machine will take it off; but they say Mr. Arkwright has departed from this, and has made an improvement upon that card cylinder. He has so; the way is, by placing those cards in a spiral line round the cylinder. It certainly is an improvement, but it was a very obvious improvement to any man acquainted with the principles of mechanics; and although this has been chosen as the most convenient way, there is another mode of producing the same effect, suggested by the drawing in the specification: for the axis in the drawing projects a great way beyond the cylinder, which necessarily suggests the idea, that it was to have a motion backwards and forwards, parallel to its axis. The spiral fillet is not essential, although it is a better method of producing the same effect; but a machine to produce this effect could have been produced from the specification alone. It would

be nonsense to protect the rights of men for ingenious inventions by patent, if other persons were able to alter the form and construction; because, every mechanic, when he knows the invention, and the effect to be produced, can alter the machine into fifty shapes, and yet, if he retains the principles, it will produce the same effect, although the machine, to common eyes, would appear totally different; it might agree in every principle of this specification, and produce entirely the same effect. This completes the improvement in the carding machine. The next machine is for sizing and roving. The parts described in the specification may be worked together; or separately, but, in point of fact, they are generally worked separately. They say, it is not said that the rollers mentioned in the specification are to be set in motion, or how they are to be set in motion. While the rollers remain without motion, they cannot produce much effect; therefore, no man can suppose that the rollers are to remain at rest. Motion must be given to them: there is no occasion to state the manner, it may be by pulleys, and in a variety of ways, well known to mechanics. But, say they, the degree of velocity of these rollers is not specified. Look to the drawing: one pair of rollers is larger than the others, consequently, the velocity of the larger roller will be greater than that of the smaller. There remains one objection more, that in the machine produced in the Court of King's Bench, these rollers were pressed down by weights; and there is nothing said about weights in the specifi-

cation. True, but it is manifest that the rollers can produce no effect, if the upper are not pressed down to the lower. Now, it is not necessary that it should be done by weights, it may be done by making the upper roller heavy enough to produce the effect; or it may be done by a spring fixed to the axis of the upper roller, which would give it a uniform pressure, and some think that the better mode. But no mechanic employed to construct a machine could be so ignorant as not to know that the upper rollers must be pressed down upon the others; therefore, that is an objection addressed to children. A fourth objection was made, that in the machine then produced, the rollers were fluted. The effect of that will be to make them draw more than plain ones, but every mechanic knows that; or, if they are not fluted, but made rough, it will produce the same effect: therefore, it was not necessary to convey the information that they should be fluted, nor, in fact, is it necessary, for they are frequently used without being fluted; and if you look to the old machine, you will see they were in that case fluted, and it would have been arrogating an invention that was not his, if he had put it in his specification. The whole of the roving machine is entirely new; for this operation was done entirely by hand before. The question will be, whether it is sufficiently described. Mechanics will tell you, that the description is so plain, that any one who has seen the specification might understand it in a quarter of an hour, and could have made it perfectly. Other parts described in the specifica-

tion are disused, and, therefore, are not the subject matter of the present action; they were different modes of producing the same effect. Now, the material point to be attended to is, that every constituent part is accurately described: you have before you the whole of these two very ingenious machines, for they are two in effect, the first for carding, the next for sizing and roving. I have, I trust, explained to your satisfaction the nature of the machine as applied to the specification, and I do not doubt but you will say, that the specification is a sufficient description of these machines. In addition to that, we shall call the first men in the kingdom for ability in the mechanical line, who will all tell you, that being informed of the machine formerly in use, and reading the specification, they could direct the construction of the machine in question. We shall also produce several workmen, who, from the specification alone, have made the machine. After that, it cannot be contended, that it is not sufficiently understood, and cannot be constructed.

After some of the witnesses had been examined, Mr. Bearcroft, on behalf of the defendant, submitted to the Court, that this appeared to be a new invention, the application of which, to an old machine, was not described. On the contrary, the patent was for an invention of a machine or machines useful in preparing these articles for spinning, and, therefore, that the case did not apply to their patent, nor to their declaration; for the new invention will not work alone, but must be

applied to the old machine. He said, he had known that objection lead to a nonsuit.

LORD LOUGHBOROUGH.—I have known it overruled. In all the oylet-hole work patents, they are additions to the old stocking frame, and they are not so described. I tried one of those causes last term; the objection made at the trial was, that the description was to be taken from the terms of the patent, which were loose and inaccurate. I was of opinion, then, that the description was to be looked for in the specification, the description of what was invented; but upon that I am very confident there was no reference to the old machine.

Mr. Serjeant Adair.—I can speak of that with certain recollection, and the same was the case with March's patent two years ago.

Some witnesses were then examined, who had made models to produce the intended effect from the specification alone, without any other knowledge of the machine.

LORD LOUGHBOROUGH.—Mr. Bearcroft, will any number of witnesses prove that this machine cannot be made from the specification?

Mr. Bearcroft.—It is extremely difficult to prove the negative, undoubtedly; but whether these gentlemen have proved the positive will be the question.

Mr. Bearcroft then addressed the jury on the part of the defendant. He felt the weight of the case as proved on the part of the plaintiff, but he had often seen cases as strong as the present,

where a cool consideration of all the circumstances has produced a conviction very different from what might be expected from the first impression. It is a great libel on the court who tried the former cause, to say, that neither judge, counsel, or jury understood it. Mr. Arkwright had a great number of counsel; were they all useless? Did they not know his case? When was the gross injustice complained of done? At the end of Trinity term, 1781, was this verdict given against Mr. Arkwright. There were then nine causes depending upon the same question. If that cause was not understood, why not apply for a new trial upon that ground? for it is no disgrace to sensible professional men, that, at a first trial of a cause of this sort, they did not perfectly understand it, and the court would have hearkened to the application. Mr. Arkwright did not apply for a new trial, nor did he try any one of his remaining eight causes. If he thought proper to appeal from that court to this, why did he not do it recently? It was notorious to the world, that Mr. Arkwright had brought an action against persons who had stole his patent, and that there was a verdict against him; it was of course understood that he could not support his patent. He lays by four years; had not all mankind a right to suppose that this patent was invalid? The consequence has been, that a great number of innocent men have set themselves to work, using, it is admitted, this invention, as they had a right to do, by the concession and confession, in point of fact, of Mr. Arkwright himself, all of

whom must now be totally undone, in consequence of Mr. Arkwright's lying by, although he was capable of producing (as it will be contended he has done to day) evidence that would have intitled him to a verdict. Why did he not produce this evidence before? No mortal could suppose he had it. Notwithstanding this evidence, I undertake to prove, that in the specification, Mr. Arkwright has not only not communicated his secret in the way that he ought by law to have done, but that he has purposely withheld it from the public. It has been said, that in this matter it is of little importance that the secret is not communicated, as it will be used by a great number of hands, and, therefore, cannot fail to be handed down to posterity. The observation is true in point of fact, but will not operate in point of law, and, therefore, is nothing to the purpose; for, if the precedent condition of the patent be a disclosing *bond fide* the secret, it is essential to the privilege granted, and, without it, he derives no peculiar privilege whatever from his invention. Now, Mr. Arkwright has not by his specification communicated to the public at large this invention honestly, and fairly, but the *mala fides* appears upon the whole of the specification. It is not calculated to communicate, but to secrete: not to open and explain, but to hide. Why are pieces of mechanism introduced and jumbled together in the drawing with what has no relation to the invention, except to create puzzle and confusion? We are told, that certain parts of the drawing No. 1, 2, 8, and 9, have nothing to do with the

business. Then I wish they did not appear. Oh, but, say they, they are original inventions for some other purpose, perhaps, and, therefore, he has a right to have the advantage of them in his patent. I doubt the propriety and the legality of jumbling four or five different inventions in one patent.

LORD LOUGHBOROUGH.—I dare say you will see the reason why they jumble them into one patent, it is to save fees. It is a practice common enough ; but when the Attorney or Solicitor General's clerks are attentive, it is not suffered to pass.

Mr. Bearcroft.—Here is a jumble of different instruments for different operations. There never yet was a man who meant really to explain what he was describing ; but, that if he put a dozen things together, calculated for different subjects, did not tell you which was for which. The best way is to pursue some *lucidus ordo*, and describe the particular parts in the order of contiguity as they lie to each other. Why is the order subverted ? He jumps from one end to the other of the machine. This seems calculated for no other purpose except to bewilder the understanding. When a patent is obtained, the inventor is bound to communicate the best way he has of performing the work by his invention ; if any alteration should be made afterwards, which is only an improvement of the machine, it would be absurd to find fault with withholding that which was not known. In the specification, there is not any thing like a fluted cylinder, or a cylinder covered with leather ; yet it is very material, and Mr.

Arkwright's own machines have been so used. The spiral fillet, instead of the parallel one, is important, and it ought to have been communicated. If Mr. Arkwright had improved his principle at the time of obtaining his patent, he ought to have communicated that improvement; and if fluted rollers are used, and are best, it ought to have been so stated in the specification: and not having been done, ought to raise a suspicion that there is a studied design to conceal.

The learned counsel, after commenting upon the evidence produced for the plaintiff, stated, that he had to produce witnesses of high reputation and great knowledge in mechanics, who will say, that with the knowledge of the old machine, and what is to be derived from the specification, they think the machine could not be made, and that it must have been purposely concealed; which latter suggestion will be supported by evidence. If an artist means to communicate the secret of his invention, why did he not shew a model of the machine to the person he employs to make a description of it? But that would not have answered his purpose; for if he had done so, many things would have appeared in the drawing, which do not appear in it. A witness will be called, who was employed in the writing of this specification, who will tell you that it struck him upon considering it, that it was not as good a description of this, as could be given. He made the observation to Mr. Arkwright: his answer was, "I do not mean to put it so that it should be understood, for then the French will

“ get it,” or something of that sort. There is another piece of evidence behind. Mr. Arkwright, after his defeat in the Court of King’s Bench, applied to the House of Commons to try if he could not get an act of parliament to relieve him : and in his printed case, stating the reason of his applying to parliament, he speaks of the verdict against him in the King’s Bench in these words : “ At the time Mr. Arkwright obtained his last patent, he justly concluded that his inventions were of great national importance, and conceived that they would be sought after by foreigners, to introduce into other countries ; he therefore, purposely, in prevention of that evil, (he had almost said national injury) omitted to give so full and particular a description of his inventions in his specification attendant on his last patent, as he otherwise would have done ; and in order the more effectually to guard against foreigners, it has been Mr. Arkwright’s uniform rule, to forbid the admission of them into any of his works.” For fear that foreigners might steal this invention, he withholds it from Englishmen to the end of fourteen years. If that is the fact, that he meant not to disclose his invention lest foreigners should steal it, he cannot have his patent ; for, at the peril of all that, the law requires it. He has declared he purposely omits a full and fair disclosure, lest foreigners should have it ; if he has done so, there is an end of his patent. It is highly for the public benefit, that, upon this occasion, a verdict should be given against Mr. Arkwright.

LORD LOUGHBOROUGH.—We must never decide private rights upon any idea of public benefit. I must tell the jury, that they must shut out that part of the argument. I cannot let a cause between A. and B. be determined upon consequential reasons, that it is beneficial to the public that A. should prevail.

Mr. Bearcroft, with great submission, thought it material in this case; for, by the statute against monopolies, no patent is to prevail, that is generally inconvenient, or against public trade.

Mr. Serjeant Adair, in reply, contended, that enough had appeared to-day to warrant his assertion, that the cause was not understood in the Court of King's Bench. Mr. Arkwright's long acquiescence in the event of the former trial, is complained of; but that complaint comes with a very ill grace from those who have been all along profiting by that acquiescence. A man who has been once beaten in a Court of high authority, does not feel himself immediately bold enough to enter into another Court. It was natural for Mr. Arkwright to endeavour to procure every ground of evidence, before he brought the matter to another discussion; in fact, this action was brought a considerable time ago: and has been brought forward as soon as the attendance of witnesses could be procured.

The question in this cause is truly stated to be, whether this specification is such as the law requires, in order to support the patent. And it has been admitted as true, in point of fact, that a declaration in the case of a machine of this exten-

sive utility, is less necessary than in other cases that are not the visible object of the senses; but it was added the law requires it. It is not contended that it is not necessary, in point of law, that there should be such a specification as will enable a proper judge of the subject to practise the invention, but a jury will be less curious and minute in examining a specification of that kind, than where there is no means of preserving that benefit to the public, but the intelligibility of the specification. An attempt is made to persuade you, that Mr. Arkwright intended to conceal this invention; not to disclose, but to render it more obscure. Now, if it is true, that from the general use of these machines it is impossible to keep them secret, Mr. Arkwright must be a downright idiot, if he had, in order to make his patent void, purposely concealed by his specification that from the public, which, it is admitted, it was impossible for him to conceal; for, these machines being necessarily brought into pretty general use, it is obvious, that if there had been no specification at all, or if it had been the most studiously obscure that ingenuity could have made it, long before the expiration of the patent, a vast variety of persons, certainly, could have made it; therefore, Mr. Arkwright must know that it was impossible this should remain a secret, and that the only effect of a studied obscurity would be to render his patent doubtful, if not void. One part of the evidence on the part of the plaintiff, if believed, must make an end of this cause. There is the evidence of five witnesses, who have positively sworn that they

made the machine from the specification. Do you, or do you not believe those five witnesses to be perjured? If you do, and reject their evidence, still the balance of the evidence is in favor of the plaintiff; but, if you believe them, your verdict must be for the plaintiff. For, if it is true that they, with no other information, than a knowledge of the old machine, and the specification of the new one, have made the new machine, it is of no consequence if fifty or five hundred men were called to prove that they could not have done the same thing. But there is a piece of evidence which deserves particular attention; the evidence of a man who had been long concerned in the manufactory, and who, immediately on Mr. Arkwright's invention coming out, had recourse to the specification, and from thence added all the material parts to the old machine. Is that, then, a specification, unintelligible as Chinese? It was the source of information to which every body had recourse, who wanted to steal the invention, and every man who had recourse to it, and had sufficient ingenuity on the subject, did steal it. If, then, one man is to have credit who tells you, that wishing to get the benefit of this, he got the specification from the office, and from thence made the machine, it will overbear the evidence of five hundred witnesses, who say they think it could not be done.

LORD LOUGHBOROUGH, before he stated the evidence, took notice of some things that had occurred in the course of the trial, merely for the purpose of laying them aside as foreign to the

purpose of the inquiry. There is no matter of favor can enter into consideration in a question of this nature. The law has established the right of patents for new inventions; that law is extremely wise and just. One of the requirements is, that a specification shall be enrolled, stating the nature of the invention; the object of which is, that after the term is expired the public shall have the benefit of the invention, but without that condition is complied with, the patentee forfeits all the benefit he derives from the great seal.

It has been said that many persons have acted upon an idea that Mr. Arkwright had no right, he having failed to establish it when this cause underwent an examination in another place, in which the event was unfavorable to him. If the question at present were what damages Mr. Arkwright should have received for the invading that right, I would have allowed the parties to have gone into evidence to shew to what extent persons had acted upon the faith of the former verdict; but the question now is upon the mere right: and if the result of this cause is in favor of the plaintiff, the verdict will be with one shilling damages. A future invasion of this right would entitle Mr. Arkwright to an action for damages, but in the present case they are not asked.

It is said, it is highly expedient for the public that this patent, having been so long in public use after Mr. Arkwright had failed in that trial, should continue to be open; but nothing could be more essentially mischievous than that questions of property between A. and B. should ever be

permitted to be decided upon considerations of public convenience or expediency. The only question that can be agitated in Westminster hall is, which of the two parties in law or justice ought to recover.

There are many objections that may be taken to patents, but the only objection in this case is, that the specification is not so intelligible, that those who are conversant in the subject are capable of understanding it, and of perpetuating the invention when the term of the patent is expired. 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.

The first witness described the machine in use before the plaintiff's patent was obtained, which was simply applied to the purpose of carding; all beyond that purpose, that is contained in Mr. Arkwright's invention, I take to be perfectly new.

The next witness was the person applied to by Mr. Arkwright to draw up for him a description of his machines to be inserted in his specification. He says positively that the instructions given to him were not to conceal, but to make the description plain; and Mr. Arkwright relied upon his skill and capacity for making that plain which Mr. Arkwright had communicated to him, in the best manner he could.

His Lordship then stated the evidence of four witnesses, who had given their opinions upon the-

ory, upon observation, and as men of skill and mechanical knowledge, that the specification was sufficient to convey clear ideas to their minds, from whence they could direct the making of the machine.

Mr. Wise says he did actually make a machine from the specification without any previous knowledge of the old machine, except a cursory view.

Thomas Wood says he never saw the plaintiff's works till last September. That about the time the patent came out, he got a copy of the specification from the office, and from that copy actually made the machine; and from the specification only, applied the parts to the old carding frame; and that for three or four years they have been constantly in use. He says fluted rollers were not new, they had been used by him years ago.

William Allen made a model of the machine from the specification. He had never seen a carding machine, but it was described to him by the person who brought him the specification.

William Whitford, after considering the specification about an hour, undertook to make the machine. The old carding machine was described to him, and he also made the machine.

Both these witnesses said the conversation was perfectly fair, and that they were not led by any thing said to them.

This is the evidence on the part of the plaintiff, and that evidence, to be sure, affords a very strong body of proof; for the question being whether the specification is intelligible or not, the man who drew the specification says he was desired

to make it as plain as he could ; and he swears that, to the best of his judgment, he did endeavour to make it plain ; that is so far, as to the fairness of the instruction. Then he and three other persons of skill swear, that it is so intelligible to their apprehensions, as to convey to them a clear idea of the manner of making the machine. Then five persons swear that they constructed this machine from the specification alone ; and one of them, divers years ago, clearly from the specification alone, made the very machine to produce the very effect, and had it in work, producing the very effect produced by Mr. Arkwright's.

The comment upon this by the defendant's counsel is, that these were trials made by the plaintiff's desire, which should have been made with more caution ; the persons should have been talked to before witnesses, but I cannot conceive that any evidence would have added force to the testimony that is given. Supposing Mr. Arkwright, in making these trials, to have made them in such a manner as to evade all suspicion, with the best precautions that the ingenuity of man could suggest, still nothing more could be attended to than the positive testimony of the persons who gave the description, and who received it. Now they swear that no other person gave them information, and the person who gave the information swears he gave them none but fair information ; and one witness swears he had no information at all, but took it upon himself, taking a copy of the specification and using it.

Mr. Bearcroft has called witnesses, many of them

of undoubted character and skill, who say that from the specification they should not be able to make the machine; and most of them have said that they think it not probable that the person who drew the specification meant to describe the invention. Now that is nothing more than a corollary from their own opinion, because it is not intelligible to them.

The last witness is the attorney's clerk who prepared the formal part of the specification, and ingrossed the whole of it, and I think his evidence does not amount to a great deal. He says, that when he observed to Mr. Arkwright that the specification was not so clearly drawn as he thought it might be, Mr. Arkwright's answer was, that it was not lately usual to make the specification too plain, lest the invention should be carried abroad; and seemed to regret that the specification was not locked up for fourteen years, as a matter of public convenience; but he added, he believed it would be sufficient for the security of his patent.

A good deal was said in the opening of the defendant's case, that Mr. Arkwright meant to understate his description, so as to keep the world in ignorance of his invention; and that, though he might do it to keep it from the French, yet that he had overshot himself, and had kept it from the subjects of this country; that he had not complied with the grant, and must stand to the consequence. Now unless a great degree of folly indeed is ascribed to Mr. Arkwright, you cannot apply that idea to his mind. He must

necessarily put people in possession of it; and it is plain, by the conversation he held with the attorney's clerk, that he thought the specification was sufficient according to the terms of his patent, that he should make his invention sufficiently known.

Having stated the whole of the evidence, I cannot conclude without saying, that this case turns upon a very short point; there is no matter of argument in it: it is simply whether you believe five witnesses who have sworn to a positive fact; for if their testimony does not obtain effect with you, it can only be on supposition that they are every one of them perjured, because the reasoning is only this; that that which five men have done is possible to be done. Therefore the only question for your consideration is, whether these five men have made the machine? Each of them come and positively swear they have done it; and if they have not done it from such information as they state themselves to have received, they are each of them perjured.

Therefore the single question is, whether you believe these five persons are perjured, or that they speak the truth? According as you are of opinion, one way or the other, you will find your verdict for the plaintiff or for the defendant.

Verdict for the plaintiff.

IN THE COURT OF KING'S BENCH.

The King against Arkwright.

June 25, 1785.

THIS cause was instituted by the Attorney General by writ of *scire facias* to repeal a patent granted 16th December, 1775, to Mr. Richard Arkwright, for an invention of certain instruments or machines for preparing silk, cotton, flax, and wool, for spinning. The proceedings originated in the petty bag in the Court of Chancery, and were transmitted by the Lord Chancellor to the Court of King's Bench, to be there tried.

The allegations in the writ of *scire facias* were,

1. That the grant was prejudicial and inconvenient to the King's subjects in general.

2. That the invention, at the time of granting the letters patent, was not a new invention, as to the public use and exercise thereof within England.

3. That the same was not invented and found out by the said Richard Arkwright.' And

4. That the said Richard Arkwright had not, by an instrument in writing, under his hand and seal inrolled in the High Court of Chancery, particularly described and ascertained the nature of his said invention, and in what manner the same was to be performed.

Mr. Bearcroft, on the part of the prosecution,

stated that a case of greater importance, of greater value to the individuals disputing it, and to the public in general, was never yet tried in any court. Upon the part of the defendant, Arkwright, it is a question of great property; for if he is right and well founded in this patent, it is of such value to him, that it will produce him great sums of money. Upon the other hand, if the patent has no validity in point of law, and yet it should be determined that it has, the consequence will be, that some individuals, well worthy of consideration, will be losers of sums much greater than any Mr. Arkwright can assume to be interested in, great as they are. There is also a matter of infinite importance behind, for if the determination should be for the validity of the patent, it will endanger the loss of the most valuable manufactory that this country knows, viz. the manufactory of cotton.

The first thing to be attended to, since these proceedings are totally to render void a patent, is the nature of that patent; and the machine from which Mr. Arkwright has derived great advantages, and of which he contends, by virtue of this patent, he has the sole use and property during the fourteen years, for which a certain act of parliament in certain cases allows a monopoly to be granted by the crown.

The date of the patent is, **16th December, 1775.** The manner in which Mr. Arkwright describes his invention, upon the footing; of which he asks and obtains the patent, and derives all the consequences, which by law he may; the expressions he

uses should be attended to, and almost every word used by him in his petition, and stated as the ground of the grant, are extremely material.

Mr. Arkwright is recited by his patent to have suggested that he has invented certain instruments or machines, which he conceives would be of public utility in preparing silk, cotton, flax, or wool, for spinning; and that the same instruments or machines were constructed upon easy and simple principles, very different from any yet contrived.

In truth, so far is this from being the true description of these machines, that they deserve a description the very reverse of this; for, in fact, they are not materially different from some before contrived; on the contrary, they are the same.

It will be impossible to understand a step of what remains behind, without first having a general acquaintance with the nature of spinning cotton, and of the process towards the spinning of it, together with an acquaintance with the patent machine of Arkwright, that is to perform the operation for preparing for that spinning.

The various manufactures which are performed in and about Manchester are fabrics so ingenious, beautiful, and useful, that they have all the qualities that can recommend them to human nature; and in that article we are universally envied, and that sort of manufacture is coveted by every nation which has at all turned itself to manufactures; the basis and principle of all those manufactures are, the fineness and excellence in the spinning

and twisting of the cotton thread, of which they are composed ; therefore, every part of the process towards the making that fine and excellent cotton thread, is of the utmost importance to the kingdom in general.

To produce a fine thread, the cotton must be carded ; this operation used to be performed by hand, and it took up a great deal of time, and of course was very expensive. The next process was, what the manufacturers called roving ; roving means taking the cotton after it is carded and performing the operation of spinning by a wheel, making it into a coarse yarn thread or webb. This coarse thread, the roving, must be re-spun to make it fine, and give it a proper twist, and that sort of consistency, which is the foundation of the excellence of the Manchester manufacture ; this too used to be done by hand. This spinning was the last and important finishing. If, therefore, a machine could be found out that in less time, and consequently at less expense, and in a better manner, could contrive to spin a second time, the first coarse spinning, called roving, it most undoubtedly was an improvement, and an invention of great value and merit, and of great importance to the public ; and for which the inventor was fairly entitled to all that reward that can be derived from the monopoly permitted by law, which is, the sole enjoyment of the patent for fourteen years.

Now Mr. Arkwright was in possession of a patent for that operation of spinning, which makes the roving into fine thread, which patent expired

upon the 3d July, 1793. The language of that patent was a machinery “ never before found out for the making of web or yarn of cotton, flax, or wool, which will be of great utility to manufacturers.”

That patent machine which was excessively ingenious should be thoroughly understood, for upon that a great deal turns, and that alone, when truly understood, is sufficient to overturn this patent, and make out one of the propositions alleged upon the *scire facias*, namely that this patent of 16th Dec. 1795, was not for a machine that at that time was a new invention.

Mr. Bearcroft then explained, by a model in court, the operation of the spinning machine for which Mr. Arkwright's first patent was obtained; and observed, that that machine would either make the roving, the coarse thread, or the spinning, the fine thread; the roving, in truth, is the first thread in the business, but it is the coarse one; but take the roving back again when it is made, and instead of the carded cotton, let the roving go under the operation a second time, and it comes out a fine thread. Both the roving and spinning are threads, the one a coarse thread, the other a fine one, equally performed by that very spinning machine.

Having given the idea of the machine for spinning, and shewn that it will operate to produce either a coarse or a fine thread, the next thing will be to shew the sort of patent which is in question.

The patent for spinning expired in July, 1803;

Mr. Arkwright had therefore lost a profitable monopoly. He was unwilling to part with it, if by any means he could contrive to keep up the monopoly in another shape. Upon that idea he took every step in the business. Mr. Arkwright, upon the expiration of the patent for spinning the fine thread, could no longer in those words enjoy that thing at all: but as the cotton manufactory depends upon the carding, roving, and spinning, if he could contrive to get a patent, and to gull the world to submit to that patent as a new invention for the roving and the carding, it would answer all his purposes.

The learned counsel then described the machines for preparing cotton for spinning, for which the patent in question was obtained, and had the operation performed in court, by first carding, and then roving the cotton; after which he observed, it was for him to shew upon what ground of law, and of fact he contended upon behalf of the crown and the public, that these two machines ought to be nullified and held of no validity.

By an act of parliament in King James's reign, which put an end to great and growing evils that the world at that moment very properly complained of, it was thought right to reserve a power of monopoly, that might be made use of for the benefit of the public; and it was thought, that if a reward to ingenious men, who should study to invent any matter of great use to the public, was given to those inventors in shape of a monopoly, for a given time, it would be a benefit to the public. That was the idea of the legis-

lature, and, of course, there was a power given to the Crown, to grant patents for new inventions, for a term of fourteen years. But adopting that idea, the framers of the act of parliament were clearly of opinion, that power ought to be guarded for the sake of the public; and the way in which they guarded it was this: in the first place, says the act of parliament, it shall ever be an express condition with the inventor, to whom a patent is granted for a monopoly of his invention for fourteen years, that he should pay for it in this coin: he should disclose the manner in which he performs his invention, in an honest, fair and plain way, so that the world at large shall be in complete possession of it as he knows of the subject at the end of the fourteen years. That is the express bargain and stipulation required by the act, and of consequence inserted in this and every other patent that is granted*.

* It may perhaps excite some degree of astonishment, that so able and learned a man as the late Mr. Beaucroft, and in such a very important cause as the present, should argue upon an act of parliament, without having read it, or even the short proviso reserving power to the Crown, to grant the sole use of new inventions, to the true and first inventors thereof; but such evidently is the fact, as the statute does not in any part of it, require a description of the invention to be enrolled, nor was the proviso for that purpose introduced into patents, for near a century after the passing of the act. This idea, however, has been entertained and argued upon by many eminent counsel, and even adopted by the Bench in some of the cases reported in this work, although it may not always appear in these reports, the word "Grant," having sometimes been substituted for the word "Act;" a liberty for which it is hoped the motive will be a sufficient excuse.

It is likewise an express condition to make a patent have any operation, however new, ingenious, and excellent the invention may be, that it should not have an effect prejudicial and inconvenient to the King's subjects in general ; in other words, to the public.

Another essential circumstance to the validity of a patent is, it must be the invention of the patentee himself ; and it must be, that the invention, and the manner of performing it, must be honestly and fairly disclosed by a specification, and the specification must be enrolled in a certain time in the Court of Chancery. All those things are necessary ; none of those things exist in this case. These are the grounds, any one of which, if maintained in point of law, will entitle the Crown to a verdict to vacate this patent.

The first objection, and the most serious to the public, is, that this grant is prejudicial and inconvenient to the public in general, as it endangers the loss to this country of a manufacture, which before was the most envied and coveted of any we can boast ; and not only endangers the loss of it, but renders it extremely probable, and tends to draw off from the industrious exercise of this business in this country, a multitude of labourers, who support themselves to the benefit of the public ; as it would carry the carding into foreign countries, and they would carry this art with them to foreign countries. Can any thing be more prejudicial and inconvenient to the subject, than a patent to a private man, which endangers the loss of a trade of such importance to this coun-

try as a nation?—If this patent remains good in point of law, it prevents every individual from the preparation of cotton for all the cotton manufactures in this country. Other countries at this moment, and for years, have had their eyes turned upon this, with an endeavour, if they can, to take from us our trade and manufactures, and this will have the effect of it, upwards of 80,000 people will be robbed of their manual labour in this business, and people will be ruined, who, upon the strength of what has passed, have laid out near £300,000 in this kind of business.

If it be asked, why did they invade another man's right? if they do it, they do it at their own peril. The answer is this. In the sittings after Trinity Term, 1781, Mr. Arkwright was the plaintiff in nine causes that he brought here for invading this patent, and using those machines without his licence. One of these actions was brought against Colonel Mordaunt, a gentleman of family, but not much fortune; who was thought, from the lightness of his purse, the fittest to be put in the front. An objection was taken, that if this was a new invention, Mr. Arkwright had not fairly communicated it by his specification; but had absolutely contrived to hide it. Upon that simple ground, to the perfect satisfaction of the judge who tried it, the jury found that the patent was of no validity; for Mr. Arkwright, instead of disclosing his invention, did all he could to hide and secrete it; and upon that ground a verdict was given for Colonel Mordaunt, and Mr. Arkwright imagined the same objection would be ad-

missible in the other cases, though the cases were somewhat different in their nature : there was an end of his patent from that time, and all the world had a right to take it so. From that time Mr. Arkwright never dared to raise this question again, till he found a disposition to go into the Common Pleas. Why did he not contest that verdict? There was not a word said against it till in the Court of Common Pleas, in the sittings after Hilary Term, 1785, when it was said that the judge, counsel and jury of the Court of King's Bench, though very ingenious men, yet, *quoad hoc*, this business, were perfectly fools, and knew nothing about it. The counsel for Mr. Arkwright, as well as the rest, did not know a bit of what they were about. It followed therefore, that ingenuity and apprehension equal to such a cause as this, were only to be found in the Court of Common Pleas.

But now to the verdict in 1781—Did he dispute it? Why did he not apply to the court for a new trial? Upon such a subject as this, there is a great inclination in a court to grant a new trial; because the court will be cautious upon a subject of this kind. It is not impossible the first time it might not be truly understood, and therefore if he could have created a doubt in the mind of the Court of King's Bench, that would be enough to grant a new trial, if he had applied for it; and if the court would not grant it, he might have granted himself a new trial; he might have granted himself eight new trials if he thought proper, for there was but one life of this cat ex-

tinguished ; there were eight left, but he never applied for a new trial, never tried any one of those eight causes. What had the world at large to conclude from that ? What are notorious trials in a great court, and what is to be the effect, if the eyes of the world are to be turned upon a decision, and the party interested to dispute the rectitude of that decision, submits to it for three years and a half, without a struggle ? Has not all mankind a right to conclude that he had given up all thoughts of the validity of his patent, and that he had totally lost it ?

But he was satisfied of the fact himself ; for, instead of applying to a court of justice, he applied to the House of Commons in order to set him right, in respect to the consequences which he submitted to in a court of law. His application to Parliament was for a prolongation of his spinning machine : that was what he wanted. He gave up all ideas of the validity of this patent, and stated in terms he had purposely avoided disclosing the invention by his specification, out of public spirit, because the French should not steal it. These are his words. “ At the time Mr. Arkwright obtained his last patent, he justly concluded that his inventions were of great national importance, and conceived they would be sought after by foreigners to introduce into other countries ; he, therefore, purposely, in prevention of that evil, (he had almost said national injury) omitted to give so full and particular a description of his inventions in his specification attendant on his last patent, as he otherwise would have done ; and in order the

more effectually to guard against foreigners, it has been Mr. Arkwright's uniform rule, to forbid the admission of them into any of his works; other gentlemen, natives of this kingdom, were most generally admitted, on proper application. Mr. Arkwright was the more inclined to omit so full a description of his inventions, as by a clause in the said letters patent, he was led to believe that it was not essentially necessary; because it is therein said, that 'the said letters patent should be good and effectual in the law, according to the true intent and meaning thereof, notwithstanding the not full and certain describing the nature and quality of the said invention, or of the materials thereunto conducing and belonging.' "

If there is such a clause in the patent, they may leave it there, it will have no effect in point of law; because it is the express condition of the act of parliament itself, he should fully and fairly disclose. The reason, says he, I did not disclose it fully is, because foreigners would have understood it; which is the same thing as if he had said, I meant it should not be understood. Did he so? Then there is an end of his patent.

The second objection is the allegation upon this *scire facias*; that this invention at the time of the letters patent, which was the 16th December, 1775, was not itself a new invention; at the time, all the parts that go to compose it, with very little or no essential difference, existed and were used, and were applied to the purpose. The larger cylinder, that performs the operation of carding, was in common and constant use; the smaller cylin-

der, for the purpose of taking off the carded cotton, was in constant use, covered all over, not only with parallel, but spiral carding fillets ; that which he uses now is the spiral one. The operation of the crank taking off the cotton from the second cylinder, is no invention of Mr. Arkwright's, it is no new invention : all its parts and operations were in use before, except the rollers, and they were not new at the time of the date of this patent, in 1775 ; for they were used in the first patent that expired in 1783. Roving is spinning, and spinning is roving ; and all is performed by the rollers ; and it is either one or the other as you put the rough cotton or thick thread. In the first place it is roving, or a coarse thread ; in the second place, spinning, or the fine thread. But, if this was a new invention, it was not Mr. Arkwright's, it was the invention of a very poor man now alive, who will be produced. He did it ; but he was poor, and could not carry it much into execution. He communicated it as a great secret to another man, who sold it to Mr. Arkwright ; therefore, it is not Mr. Arkwright's invention.

The last objection, which is a very important one, if not the most important in the business, is, that he has not fairly disclosed his invention. He stated his own case rightly and truly to the House of Commons, that he did not disclose it by his specification*.

* It may be assistant towards the elucidation of the following arguments, to give, by way of note, the words of Mr. Arkwright's specification, although no complete idea of the specification can be given without the drawing. It has not, however,

No. 1. the first article, describes a beater, or breaker of seeds, husks, &c. and a finer of the

been thought necessary to increase the expense of this work, by having the plate engraved, as the same reason would exist for engraving specifications in some other of the cases reported. An additional reason may be, that it is engraved in the printed account of this trial, and in Mr. Collier's Essay. The words are as follow: "Now know ye, that I the said Richard Arkwright, in compliance with the said proviso, do hereby describe and ascertain the nature of my said invention, and declare that the plan thereof, drawn in the margin of these presents, is composed of the following particulars; (that is to say:)—No. 1, a beater or breaker of seeds, husks, &c. and a finer of the flax, hemp, and other articles which are to be prepared for dressing, in which (a) is a wheel with teeth, which by acting upon a lever, raises the hammer, (c) the lever, being moveable, upon the centre (d.) No. 2. an iron frame with teeth at (a,) working against a lower frame with like teeth at (b;) this lower frame is firmly connected to a wooden frame, by means of the screws (c, c;) the upper teeth are made to act against the lower, by means of the joints, (d, d, d, d.)—No. 3, is a piece of cloth with wool, flax, hemp, or any other such materials spread thereon, as at (a.)—No. 4, is a crank and a frame of iron with teeth at (a,) being moveable at the joints (b, b, b, b,) by means of cranks, and by a cord turning the pulley or wheel (c;) this motion of the teeth (a,) works them backwards and forwards upon the cylinder, No. 5, and dischargeth the cotton, wool, &c. from it at (d.)—No. 5, is the last-mentioned cylinder, which hath fillet cards: behind this cylinder, No. 3, delivereth its contents upon another cylinder.—No. 6, consists of rollers fixed to a wooden frame, the contents of No. 5, being brought to it at (a,) and going through at (b,) produceth it a proper size (f;) (c, c,) are brushes for clearing the machine. No. 7, a cylindrical box for twisting the contents of No. 6, at (b;) (a, a,) are two rollers, one moving the other, between which the contents of No. 6, passeth into the cylinder (b;) (c,) is a dead pulley fixed to the frame;—(d,) a cord which passing from the pulley (c,) moves the rollers (a, a.)—(F,) a wheel; the movement of which is

flax, hemp, and other articles which are to be prepared for dressing. Now as that is the specification, and the disclosure of the invention, for which this patent is granted, it may be expected that this hammer is necessary for the performance of the work. It is never used, and is put in front of the specification for no other purpose but to puzzle and confound. This hammer is not only useless, but it is mischievous; if you put cotton under this hammer, and work the wheel about, you will absolutely spoil it for the operation of roving and spinning. We should be late indeed in the discoveries of this country, if we were to resort to Mr. Arkwright in the year 1775, for the invention of the lever, with a hammer at the end, to be turned by a wheel upon a centre: no man can tell who was the inventor, it is so old and well known.

No. 2. is an iron frame with teeth, working brought from (F,) to No. 10, and is fixed to No. 6.—No. 8, a machine for twisting the contents of No. 6. in which (d, d,) is a frame of iron; (b,) a roller, on which a bobbin, (c,) is fixed; this is turned the same as No. 7, that is, by a dead pulley, or wheel fixed to a wooden frame, at (g.)—No. 9, a spindle and flyer, being fixed to No. 6, for twisting the contents from (b,) in No. 6.—(d,) is a pulley under the bobbin, which hath a communication by a band to No. 10, at (d, d,) it being a conical or regulating wheel, which moves the bobbin quicker or slower as required.—No. 10, a spindle, which being fixed to No. 6, at (a,) worketh No. 7, No. 8, or No. 9. at (F, F, F,) by the pulley (F, c.) (d,) a regulator for No. 9.—(b,) a socket, having a bolt going through (d, d,) and (F, c,) to (G,) stops or sets the whole going by means of a catch (a,) for the pulley (G, G,) being loose upon the spindle, (o,) a lever, moveable about, (k,) raiseth or falleth the bolt (h.) In witness, &c.”

against a lower frame with like teeth ; this lower frame is firmly connected with a wooden frame by means of screws ; the upper teeth are made to work against the lower by means of joints. So here are artificial teeth, but for what purpose, except that of confusion, cannot be shewn, for in fact it is not, nor ever was applied in this business.

Now we come to something that is meant to describe the thing you have seen ; but here, too, Mr. Arkwright is exceedingly sparing of his disclosures. The cloth with the wool upon it which is called the feeder. There is in the centre of it a little roller, upon which it turns round with firmness, without which the cloth and cotton would get within the wheel : but that roller which is the most essential part of it is not pointed out in No. 3. In explaining a complicated machine that was to perform a process in a manufacture, if it was meant to communicate it to other men, the course would have been to speak of that part of the machine which first begins the work ; then to speak of that which succeeds in the next part of the operation ; and so on to the end. Method and order throw light upon any subject ; therefore it was not for Arkwright's purpose to proceed in any order. The next thing to the feeder and the rollers, is a very important part of the machine ; it is a great carding cylinder : of that not a syllable is said in the specification. Why?— Oh, say they, we have no occasion to describe that, that was well known and common in the trade, we apply our new invention to that old

carding frame and cylinder. Do they so?—Then it is a flat contradiction to the patent, for it ought to be for the application of that novelty, and produce an effect by its application to the old machine, that should be stated, and many of those patents have been questioned, and that point has been solemnly determined by the court; because, you are inventing a new thing that will produce a new operation; you are not to take that which is an old invention, and put it together, and call it a new invention; but you should state, that it is for an addition to an old invention. It is essential to the description that he should tell how he performs this invention. Does he not do it with the assistance of the old carding cylinder? Ought he not to tell you so, and that the invention is an addition to it?—but he has not said a syllable of it.

After the cloth, which is the feeder of the cotton, the next important parts of the machine are, the rollers. Do they not occur next in order? No; that might have explained the thing, and put people in mind of the rollers, and the former patent for spinning. But for the purpose of confusion in general, those that ought to occur, as No. 4, after No. 3, are postponed to No. 6, and instead of speaking of them, the crank, with teeth, is mentioned, that is No. 4, but that is not the natural place for it.

No. 5. in the specification is described as a cylinder, which has fillet cards, behind this cylinder No. 3. delivers its contents upon another cylinder. In the specification it is a cylinder with parallel fillets, but the spiral fillets are the best; they use

them, then why insert parallel ones in the specification?

Then we come to the rollers. Mr. Arkwright was vastly shy in talking about the rollers; he certainly could describe them, for he has described them in his first patent, he thought it necessary to describe them then. Why not now? because if he had described them, he must have described them in the same manner, and then it would be seen that it was the same thing as his former patent, and that after that had expired, still he wanted to have it again, and that is the reason why he stopped short of the description.

We then come to No. 7, which is the can upon the roving machine, but there is nothing new in that can; except a pair of rollers, it was like the first expired patent, and like the rollers, is put for no other purpose than to confound and puzzle, and to hide the identity of the thing. It produces no new effect, and at this moment those that use Mr. Arkwright's machine most frequently use it without the can.

No. 9, is no new invention, but No. 9, and 10, are exactly like No. 1, and 2; that is, they have no relation to the subject, and never were used at all.—No. 8, is not used at all.

A witness will be called that was actually employed to draw the specification by Mr. Arkwright, who was so struck with the lameness of the specification, and its inadequacy to convey the idea of a new invention, that he said "I don't think this will do, nobody will be able to do it by this;" "Never mind that," said Mr. Arkwright, "I don't mean they should," or to that effect.

This is the nature of the case, and the evidence to be produced will undoubtedly establish every one of the objections stated, namely, that it is a great inconvenience to the public, that it was not a new invention at the time the patent was granted, that it is not a new invention by Mr. Arkwright at all, and that he has not disclosed his invention.

Mr. JUSTICE BULLER did not permit the counsel to call any evidence with respect to the first issue, upon the ground of its being merely a consequential issue. It is a question of law, whether it is prejudicial or not? When the facts were stated, therefore, if it was thought necessary to attack the patent upon those general words of the act of parliament, it should have been stated in what respect it was so then, and the fact would have been put in issue. This was such a surprise upon the party, he could never come prepared to answer it.

Mr. Serjt. Adair, for the defendant, began by stating that if there ever was a case which called for a cool and deliberate hearing, and a minute attention to both sides of the question, it certainly was the very important cause to be then decided. What passed upon former occasions in this court, or any other, was nothing to the purpose, and ought to have no influence upon the verdict. Upon both the former trials, the single question was, Whether Mr. Arkwright had sufficiently described his invention or not? The utility, or originality of that invention, has never been disputed till to-day.

That the continuance of a patent may produce some inconvenience to those engaged in the same branch of manufacture, is not to be denied; but that is an inconvenience which the law has recognized, and which they must submit to, if the party is entitled to the protection of the law; because the law has thought proper to give this encouragement to ingenious inventors. If no benefit was to be derived to the inventor from the exercise of his ability and ingenuity, for the loss of his time and the expenditure of his fortune, who would be sufficiently public-spirited to devote their time and labour for the benefit of the public, in a thing that the public were immediately to derive a benefit from; and for the sake of the public to ruin themselves and families? But in order to prevent that discouragement, the wisdom of the country has thought fit to hold forth that encouragement to men, to give their time to the improvement of the manufactures of the country, and they could not have framed one better adapted to the purpose, because the reward is proportioned exactly to the ingenuity. If the invention is worth nothing, he will derive no profit; if ingenious and valuable, he will derive an adequate profit during the time, and the public will receive the benefit in reversion.

The questions to be tried are these. First, whether this is, or not, a new invention? In the next place, whether Mr. Arkwright is, or not, the inventor? and next, whether he has sufficiently disclosed the nature of that invention; to

secure the benefit of it to the public, after the expiration of his patent?

With respect to the two first questions, it will be necessary to consider the principles upon which those questions ought to be tried, and a precise idea should be formed ;—what is a new invention within the meaning of that word, as applicable to improvements in the manufactures of the country, or upon machines intended for that purpose? It is not now to be decided, whether a new invention or improvement produced to the public, and made the subject matter of a patent, must be all, or perhaps, any of the constituent parts of the machine new ; for the more important part of the mechanical powers have been discovered many centuries ago : therefore, if things are to be traced to their source, to their first constituent parts, no man living could produce that which would deserve the name of a new invention. It is the combination of those parts in the machine, and producing the effect of them, that alone constitutes a new invention ; in other words, that is a new invention in a machine which consists of a new combination of old parts, and that is a new invention which consists of a new combination of old principles. The evidence that has been produced has been calling witnesses to prove, that in respect to each particular part of the machine, it has been in use before Mr. Arkwright's patent ; but not one witness has been produced, who ever saw such a machine as Mr. Arkwright's before the date of his patent, or who has proved that the combination of those parts has been applied to

the purpose, or that the work to which they have been exercised has ever been done before by any individual, or that the carding machine and the roving machine have ever been used before, as applied to the purpose of Mr. Arkwright's patent, and the use of the particular parts of it.

With respect to the crank, No. 4, several witnesses have said, that part of the machinery had been in use before the date of Mr. Arkwright's patent; but some doubt has been left upon their testimony, which will, in some degree, be cleared up, when the witnesses for the defendant come to be heard. Certain it is, the application of that crank was originally made by Mr. Arkwright; but whether the evidence that before he had obtained his patent, the discovery and application of this crank had so far gone abroad that it was used by others, and applied to the purpose, will amount to such a public use and exercise, even of that part of the machine, as would be sufficient to deprive Mr. Arkwright (who certainly was the inventor) of the benefit of his patent, is a question of law. The mere circumstance of this use or application of the machine having been found out or known to others before the date of Mr. Arkwright's patent, is not sufficient to avoid that patent.

The question to be tried, is not whether this was a new invention, strictly; but whether it is a new invention, as to the public use and exercise thereof? The man who first brings his invention to that degree of maturity as to make it capable of general use, he alone is entitled to the

patent; and however others may have tried experiments, however they may have, for a time, even worked experimentally in their shops; yet if not applied to the general purposes of manufacture, Mr. Arkwright will be entitled to a verdict.

After commenting upon the evidence, with respect to the other parts of the machine, of which it was alleged Mr. Arkwright was not the inventor, the learned serjeant came to consider the objection taken to those parts which were said to be parts of the spinning machine, and observed that it was an undoubted fact that the spinning patent never paid for itself, nor indemnified Mr. Arkwright for the construction of those machines, because of the modes in use at that time for preparing the cotton from the coarse state, which employed much time and many hands to prepare it for spinning, and the spinning machine could not be applied to that extent and celerity as it might have been, if this discovery had been made, which is now pretended to be cotemporary with that. Is it possible to believe that Mr. Arkwright's new patent for roving was nothing more than an intent to continue the spinning patent? If the spinning machine was equally applicable to this purpose, is it to be conceived he would have been so long without reaping the benefit of this useful invention?— Had Mr. Arkwright known that, at the commencement of his spinning patent, he could have applied that machine to the purpose of roving, and could have had a complete machine for

carding and roving ; it would, in all probability, have produced by this time to Mr. Arkwright all those profits which he has never received but in idea : the fact is, it never occurred to him, or any body else, that those machines were applicable to the purposes which have been since discovered. If the invention is new, as to the application and exercise of the machine, and the introduction of a new part, or the application in a different manner to introduce a different effect, that is to all intents and purposes a new invention, though some parts were used in the old machine. It is alleged, that the roving machine in its parts consists of No. 6, and No. 9, which are the same, as they say, with those in the spinning machine : supposing they were, is it contended the roving machine, which consists of Nos. 6 and 9, are the same parts of the machine with No. 7? They are parts of the machine, though not pretended to produce the effect, with which the spinning machine has nothing at all to do ; then, it is an answer to say, a combination of those parts has produced a new machine, applicable to a new purpose.

There must have been some reason that this evidence, in defence of these encroachments, has been hitherto concealed till four years from the expiration of the patent ; if, therefore, Mr. Arkwright's acquiescence under one verdict is talked of, what must be thought of the acquiescence of gentlemen, possessed so many years of the most decisive evidence to annihilate Mr. Arkwright's patent? they have put themselves to the expense

of thousands of pounds in litigating the other stages of the cause, and it is only to-day they have found out that evidence which is stated to be so material as to make an end of the cause.

Mr. Arkwright stands in this critical situation: if any one of these issues is found against him, it is the same as if the whole were; they all equally go to the invalidation of his patent: he therefore has the labouring oar in the highest degree. It is incumbent upon him to entitle himself to a verdict upon all these issues: some observations are therefore necessary upon the principles upon which the other issues ought to be decided.

Where a man would, by the authority of the crown, intitle himself to an exclusive benefit for a limited time, care should be taken that the secret should not fall with him, but it should be recorded, and remain for the benefit and free exercise of the public, after the expiration of that time; that is the meaning of the law that requires a specification: therefore, the language of the law and common sense is, that that specification is sufficient which does preserve the benefit of the discovery to the public.

Another circumstance which should be attended to is, the different subject matter for which patents for new inventions may be granted; and there is none in which the minute exactness of a specification is so little required as in that of an improvement in machinery, for the moment the machine is brought into use, the inventor not being himself the maker; the workmen employed in making those machines, and the workmen employed in

the manufactories, are all possessed of the secret. In this specification the nature of the thing secures the benefit to the public, for it is an absolute impossibility that the machine can be brought to perfection, and remain in use for fourteen years, and the construction of it should remain a secret at the end of the term. It is not contended from that principle, that those specifications that are necessary should not be made in the case of a machine, or that the specifications should be wholly unintelligible, or that the party has then complied with that requisite. It is admitted, that a specification that cannot be understood is the same as no specification at all; but in the construction of a specification of a machine, common justice requires you to be less critical and exact than in the specification of a medicine or instrument which must die with the author of it. The reason furnishes an answer to the imputations thrown upon Mr. Arkwright of a fraudulent and studied concealment of the invention, which is, the absolute impossibility of such machines being kept a secret. He must be below the common rank of men to be guilty of so gross an absurdity as to destroy his own patent, by endeavouring to conceal that which all the world knows is impossible to conceal, from the nature of the business. Then as to the degree of perspicuity, it is not only not necessary, but not proper that it should be so described that any man without a previous qualification but that of being able to read, should understand how to make the machine. If that was the meaning of the law, all those mischiefs,

which there has been some evidence to shew did suggest themselves to Mr. Arkwright's mind; would arise from the invention getting abroad; and perhaps our enemies, during the time it was locked up from public use here, might make use of it, which would be injurious in the strongest degree; that is not, and ought not to be required by law. What the law requires is, that the specification ought to be such as to enable a mechanic of reasonable general knowledge in his profession, and thoroughly acquainted with the machines before in use, to produce the same purposes, and all the prior improvements of them; with that previous knowledge, and the assistance of the specification, to make the machine; that is the true standard upon which the specification should be tried: and if the specification is intelligible to those that ought to understand it, whose business it is, and who have been bred up in it, and know the effects, and the methods applied before, it is intelligible according to law and sound policy, and is all which the law requires.

As to another part of the case, there are in this specification several distinct parts of machinery which certainly do not now compose any part of the machine. It will be shewn why they were so introduced, although it was said to be only to puzzle and perplex, and render the specification more obscure. The subject matter of the patent is, for a method, said to be a new invention, and of public utility, in preparing cotton; not cotton alone, but silk, cotton, flax, and wool for spinning.

No. 1, it is said, can be introduced for nothing but to puzzle; that it is not only useless, but mischievous if you were to beat cotton with it: but the patent is not confined to cotton, and who has not heard of the beating of hemp? It is a thing in constant practice; and it is necessary that hemp should be beaten before it could be carded, or any thing else done with it.

No. 2 was a machine distinct in its nature from the other. It occurred to Mr. Arkwright that it might be made useful in drawing out and stretching the fibres of the flax, hemp, &c. previous to being carded; but the card is afterwards found to answer every purpose intended for that: that has, in fact, been laid aside, and is not now in use. But it is not law that a man is under the necessity of continuing the use of every circumstance he shall specify in his patent, or be in danger of losing his patent. A man applies for a patent frequently in the infancy of an invention: must he put every thing in it that appears useful to be applied? Does the law require, if upon repeated experiments, and better knowledge, they find any parts may be more conveniently laid aside, that by so doing they forfeit their patent, which was more complete without them?

As to Nos. 8 and 9, the objections appear to arise from a total neglect or forgetfulness of the terms of the specification itself, for they stop at No. 9; they totally forget that No. 10 exists, much less the manner in which it is described. No. 10 is described as a spindle, which being fixed to

No. 6, worketh Nos. 7, 8, or 9, by a pulley. No man can conceive that Nos. 7, 8, and 9, are to become parts of the machine at once.

Having replied to those objections, it was contended, that the rest of the specification contained a complete and full description, and was intelligible to those that are mechanics, and acquainted with the machines formerly in use: to such a man, in point of law, this specification is addressed.

No. 3 is described to be a piece of cloth with wool, flax, hemp, or any other such material, spread thereon. Now, it is said, this is an exact description of the old feeder; but that which is not explained by words, is explained by the drawing: it must not be a flat piece of cloth, but a piece of cloth rolled up, of which the drawing conveys the idea; the cotton is not to remain flat as before, but to be rolled up.

Another objection to it is, that it is bad; because, from the drawing, there is no axis or roller which it is rolled round. But if it is true that this cloth could not be used unless it was rolled upon a roller, every man who was of that opinion would have rolled it upon a roller, notwithstanding it was not so specified; it would not, therefore, be right to avoid a specification on that account: but the roller is not necessary, it may be done without any roller at all.

The next part of the machine is the crank, No. 4; not one of these witnesses pretended ignorance upon that subject, because no mechanic

that sees the drawing could doubt about it; no smith is so ignorant that he cannot make a crank. They say, that don't stand next in order in its application to the machine, though it stands next in number: but that objection is as frivolous as any that can be made. The description in the specification says it works backwards and forwards upon the cylinder No. 5, not No. 3, and discharges the cotton, wool, &c. from it.

The next is No. 5, the last-mentioned cylinder, which has fillet cards instead of the horizontal cards before in use. Two cylinders were before in use: when you know that, and are told that No. 5 is a cylinder from which the cotton is to be discharged, could any man of common sense doubt that that is to be the second cylinder and not the first? It also describes fillet cards; and it is said that the machine now used has not such cards, but has spiral fillets. The spiral fillets are pretty generally used, and have been used for some time back, and are certainly an improvement. It is true No. 5 describes parallel fillets, and not those now in use; but it describes one that acts upon the same principle, and will produce the same effect, but in a less improved state, to that which subsequent ingenuity has made it.

If this is a sufficient description of the invention, and will produce the effect desired, that is sufficient. Whether it is a subsequent improvement made by the inventor himself, or any body else, it will not affect or have a retrospect to that specification; the specification need only describe

the principle upon which it is to act. It would be hard indeed, and counteracting the intention of patents, if that was to cramp and restrain him from making further improvement, lest the specification should be found defective; the subsequent improvement by Mr. Arkwright or others would not vitiate the specification, if it contains the description of a machine that will answer the purpose. It is said, if the first machine that used the cotton was spread all over, it is clear the fillet cards took no more than their own breadth, and the intervals were choaked up. That is true, if they were to be spread all over; but who told them it was to be spread all over? If they make a machine with such fillet cards, would any man spread it all over for any other purpose but to choak the machines? Could any man be so ignorant to suppose the fillets could act beyond their own breadth? Is there any thing in the specification which directs them so to do? If it did, it would be obscure indeed: that, therefore, is no objection to the fillet cards. It will answer if it is spread its own breadth, which is sufficient for all the purposes of the manufacture; but in the drawing of the axis of that cylinder, it is of a very extraordinary length, not cut off just where it should be inserted in the frame: it is of a length that leaves room for the cylinder to be moved backwards and forwards in a direction parallel to its axis. Now the mechanics who will be called in evidence will say, that that length of axis would necessarily suggest that idea to their minds, if

they intended the cloth to be covered its whole breadth; and that if it should be taken off the cloth, it should have the length of axis which would allow for its being taken off, and that is conveyed by the drawing. It will perform that effect, and is, perhaps, a better method than that which is but just hit upon, and carried into use, of the spiral fillets which card off the whole, and enables you to spread it the whole breadth; but if it is a better way, and more commodious by the spiral cylinder, notwithstanding the finding out those principles afterwards, no patent can restrain an inventor from using it.

The most important difference of all the others between this machine, new improved and perfected by Mr. Arkwright, for which new improvement he has got his patent, and the one in use before that, is—by the old one you take off the cotton by short lengths, which rendered the manufacture much inferior, and *this* takes them off by one continued operation, the carding going on as long as it should be fed with cotton; that stands undisputed with Mr. Arkwright.

Having now gone through Nos. 3, 4, and 5, which, together with the parts of the old machine, will form a complete carding machine; therefore the specification is sufficient to explain it, and the application of it to the old machine. The want of direction of that application has been complained of. Now there is an expression which does most clearly and indisputably point that out; it is this: No. 5 is the last-mentioned cylinder

which has fillet cards, “behind this cylinder (to wit, No. 5) No. 3 delivereth its contents upon another cylinder.” Now can any man who knew the former machine consisted of two cylinders to a feeding machine, and delivereth its contents upon one of those cylinders, and is told in the new machine No. 5 the new cylinder and feeding machine delivers its contents behind it upon another cylinder,—can any man, in his common senses, doubt that that other cylinder is a new cylinder? Then the place of the new cylinder and the old cylinder is correctly ascertained; for No. 4 describes the crank as discharging the cotton from the new cylinder; it fixes the place of that cylinder to be the last of the two, not only the use, but the locality of both those cylinders are therefore ascertained to every man of common understanding.

The learned serjeant then, by a machine worked in court, shewed that the cardings by the old method were taken off in short lengths, and that the fibres did not give the length even of those cardings, but were transversed; whereas the fibres of the cotton carded upon the new machine were all longitudinal. That No. 4 unrolled without a roller in it. He next shewed the operation of the cylinder with the fillet cards and the crank, whereby the cotton came off in continued lengths from the fillets; and contended that any man of common sense would say it was a complete description, because No. 3 is the feeder which feeds it with cotton, No. 5 receives the contents of the carding machine, and the contents are discharged

from No. 5 by the crank, after it is carded, which is the last part; and that it was clear, from the description of those numbers, that no man would look for any part of the carding machine without.

The next thing is the roving machine, which produces the two operations of sizing and roving, which is the second operation. That machine consists of Nos. 6, 7, and 10. The reasons why no man upon earth could conceive Nos. 8 and 9 made a part of it have already been stated. Some of the first mechanics in the kingdom will give evidence that the drawing and description does convey a distinct and intelligible idea; and that they could direct any man to make the machine for what is called sizing by the description. The next is the roving box, No. 7, which is described to be a cylindrical box for twisting the contents of the rollers No. 6, which the mechanical gentlemen will say is perfectly intelligible. No. 10 is a spindle; the place where it is fixed is described; the regulator which stops it and sets it going is an improvement, but not an essential part of the machine; it may be added or left out, the effect is the same. The machine consists of three parts, Nos. 6, 7, and 10, all of which are necessary to produce a complete effect; and therefore to complete the different machine from the spinning machine, there is not the same combination of parts, nor are there the same parts; upon the whole there is a complete machine, in some parts essentially different, and in their combination totally different, from that in the former patent.

Until this ingenious combination, it never entered into the head of any man that the spinning machine, or any part of it, was applicable to the purpose of roving.

Three distinct classes of witnesses will be called: first, those acquainted with the cotton manufacture, who will prove that these machines, in their improved state, were not in use before Mr. Arkwright's invention; next, some of the most eminent mechanics in the world, who will give the most solid reasons, and declare, that from the specification alone, provided they were informed of the machine before in use, they could have produced a machine in its improved state; and lastly, workmen of that trade, who will swear not only that they could make the machine from the specification, but that they have so done without any other instruction but being apprized of the machines formerly in use, and have brought them to a state of perfection to act upon the same principles, and produce the same effects. So far, therefore, as to the attempt made to prove there is obscurity in the specification; it is perfectly nugatory.

The last piece of evidence is the paper which purports to be a Case intended for the House of Parliament. In what way Mr. Arkwright was advised to state his Case there, is wholly immaterial in a case that affords so much actual evidence of the fact; and that Mr. Arkwright could study to conceal from his country this invention, which it will be proved, is effectually described, is

altogether an impossibility; and, therefore, if it was intentionally rendered not so clear as to be understood by Frenchmen, who are totally strangers to the cotton manufactory, he has done right and laudably, if he has not done it so as to conceal it from the millwrights and machine-makers who understand the former machines in use.

Mr. Bearcroft, in reply, contended that three propositions were made out, every one of which destroys the validity of this patent.

The first proposition is, that this machine was not a new invention when the patent was obtained. What is the invention? A machine for preparing cotton and flax upon simple principles, but in a very different way than ever was done before by spinning. Now is this done by any new invention? If it is, is it not done by the application of several other things to the old carding machine? Does the merit of the invention consist in that? Why is it not so described? If the merit of this machine was ever so new and meritorious, they have not described it in their patent. For if the merit and novelty of the invention consists in the application of all the parts in the old machine, and any new matter added; in point of law, in order to maintain their patent, that ought to be their description. It is a settled point, for it has been so determined, that if a new invention, which is the ground of a patent, is the addition of a new application to an old machine, they should so describe it in their patent; it was expressly determined in the case *Williams v. Brodie*. Williams

brought an action against Brodie for invading his patent for a machine which was described all of it together, taking it in the patent, and covering the old stove, which was an existing thing, which the world was in possession of before. The plaintiff Williams's merit was very great; it was allowed on all hands to be excessively ingenious, and perfectly equal to maintain a patent. It was the insertion of a pipe for conveying the air into the same stove; it was much admired, and the whole world bought it. But it was not described properly in the patent, it was taken with the addition, describing the thing in the patent, and the stove with it; but it was not described as a new application of a new invention upon an old thing; upon which there was a verdict for the defendant.

If an addition is made to an old machine, and it is described all together in the patent, nothing but confusion will follow; and although the patent upon the face of it seems to cover the whole, it does not. Many are the inventions of new applications to the old stocking frame: that was the form of all the patents; they are patents for that application, describing it as a new application. This is not so: but, taking these as additions to the old machine, was it a real novelty at the time of the patent in 1775? What is the feeder? Cotton upon cloth. So was the old one. The difference is, it is rolled up; but have any of the witnesses proved any important or great convenience of the sort it describes? Can it be said, that the invention of this cloth, rolled up and covered

with cotton, is so superior to the old one in use long before, that it alone is enough to ground the merit of a new invention? After the cloth feeder, we come to the old carding machine; but, as we are hunting after novelties, we must dismiss that old machine. Then what is the novelty? It is a cylinder that procures a perpetual carding. Is that a novelty? Mr. Pilkington swears the contrary. Then there is no novelty in that. But, say the gentlemen, that is an improvement: and, if we have a patent, may we not improve it afterwards, and use it? Most undoubtedly you may; but what have you got this patent for? Substantially only for that which existed at the time of the patent; not for that which is to be invented afterwards. But finding, as they say, the spiral fillets more convenient, as they take all off, upon what ground are they to be taken to be part of the patent? If it is not so, the merit of the spiral fillet is out of the question; for it is no part of the patent, and is not specified, and did not exist at the time: it is an after thought. But although the cylinder with parallel fillets, performing the continual carding, exactly in the same way as stated in the specification, was in use before, it is said, it was not in public use. What, then, is public use? It was used by Pilkington in the presence of Arkwright; he used it for the purpose of his trade, and in the presence of all his servants that were employed about him. Is not that public use? But, say they, it was all stolen from Mr. Arkwright. If Mr. Arkwright thought Pilkington was invading his patent, could he not

have got some of the various servants that assisted in that operation, to have given evidence against him? Mr. Arkwright is ready enough with his actions, and would have brought one against Pilkington if he dared; and the true reason why he did not, was, that they invented, and were in the exercise and enjoyment of it before him.

It has been shewn, that the feeder is not new, and that the continual carding by fillets is not new: the spiral fillet is out of the question, as it was not existing at the time, nor is it in the specification.

Then there is the crank. Is that new? One of their own witnesses said that it was used in 1772.

Then as to the roving machine; we are asked is there no novelty in the rollers? None at all; they were not new in December, 1775, because they were invented before; and we will suppose by Mr. Arkwright, upon which his original patent for spinning was granted, and of which he has had the benefit for fourteen years, and raised a great fortune of above £100,000. But it appears from his printed case, that "he wanted to connect, and confirm, and to consolidate the former patent with the present." That was the secret of the whole; his great object is to preserve and elongate that patent which he thought expired too soon. But he cannot, by law, get the same thing which he tried the House of Commons for; and as all these rollers for roving are the identical rollers for which he had the benefit of his former patent, and applied to the spinning, all the dif-

ference between the roving and spinning being, that one is a coarse thread, the other a finer. Where is the novelty, if this produces the same effect, and the difference only coarse or fine ?

Now, as to the box. The learned Serjeant says, this tin canister is itself an invention that deserves a patent. Why ? because they have clapped a couple of rollers upon the top of it. That, our witnesses say, does more harm than good, which evidence stands uncontradicted ; for the first manufacturers, in point of profit, work it without rollers : not because they cannot buy it, but because they cannot get any thing by it. These observations, it is hoped, will be sufficient to maintain the first allegation, and to entitle the king to your verdict.

To proceed to another point. Suppose it is new ; Mr. Arkwright is not the inventor. A witness of unsullied character, who was bred up to this business, upon his oath positively says, he himself invented rollers exactly like those, and that they were employed in the same business. That he communicated it as a secret to one Kay ; Kay tells Mr. Arkwright of it, who, by the next morning, was satisfied of the value of this invention, takes Kay for a servant, keeps him for two years, employs him to make several models of that which is now called a new invention, and made the foundation of this patent.

Now to the last question, which is the same that has been twice tried. It was decided one way in this court, another way in the court of Common Pleas ; it comes, therefore, fairly, and

without prejudice, for decision upon the present trial, and the present evidence. The point is, that Mr. Arkwright, by his specification, not only did not make a fair disclosure, but purposely intended to puzzle and confound the secret, to prevent its being understood. Is there any doubt, but Mr. Arkwright was perfectly equal to the description? He could have done it fairly, if he had been fairly disposed. His specification under the first patent for spinning—was not that a discovery of importance? Was there any reason why he should be more willing to part with that to the French, than the new patent? There he does all I wished him to do here; all that a man does, who fairly means to disclose the thing, he does; that is to say, there is an exact drawing of the machine itself, the perspective in such a situation you can best see the most of its parts. But, because the drawing in perspective would of necessity hide some parts of it, the principal parts, the several rollers are drawn by themselves, and described exactly; and lest there should be any mistake about it, there is a scale at the bottom of the drawing. That is the specification, and that is the description by which any workman, who makes machines, can make that machine. It shews, that Mr. Arkwright can disclose when he pleases, and can put it in every part so plain, that a child may understand it; and why not do it afterwards? Why disclose fully in the first instance? He knew the value of his patent, and was ready to pay the price of it. Why not do the same now? because, if he did, he knew that any

man who put his eyes first upon that patent and specification, and then upon this specification, if fairly and fully made, would have seen that they were in truth the same. Comparing this specification which he chooses to make, with that he made before, could he not, if he would, have given a proper description of it? It is true he chooses not to do it. If this had been the first time, he would have had an excuse; he might have said at first, I did not understand it, if the first had been incomplete; the second I did understand better, because I had experience. However, the second description is not the best, but it is just the reverse, manifestly for the purpose of deception.

Then there is the evidence of Crofts, the man to whom Mr. Arkwright goes to make his specification; and when the man says, I don't think this is a proper specification, I am afraid it will not do, says Mr. Arkwright, I mean it should do very well for the patent. That seems to be the substance of his answer to Crofts. And why not do it? We are told, because he chooses to keep it from the French. The printed case states, two or three times over, that to be done on purpose. Is it possible, then, to say any thing but this of it, that, beyond all doubt, this gentleman meant not to disclose the invention?

We are very properly asked, what is the sort of disclosure required by law? These are the words of the act of parliament, and the words of the concession upon which all letters patent are granted; it ought to be a specification "particularly describing and ascertaining the nature of his inven-

tion, and in what manner the same is to be performed." The evidence called upon that point differ in opinion. Some say it is impossible to do it by the specification, others giving an opinion that it may be done; and two persons have chosen to swear, they did it without any assistance. It is wonderful and extraordinary, and so extraordinary, that if that sort of thing could be fairly performed, it is of the utmost importance to Mr. Arkwright to demonstrate the fact to be so. Mr. Arkwright was warned by the two first trials, and ought to have taken care to have gained it the utmost credit of which it was capable. Two men swear it; one of them had a conversation with Mr. Arkwright, and somehow or other it was, he took care to acquaint him with the old machine; two or three words cleverly put in might direct the man's ideas to this. What ought Mr. Arkwright to have done? He ought to have desired persons to pick out able workmen, and put them in rooms with witnesses, and have had no communication with those witnesses, and brought witnesses to say he had no communication with them, and have put the specification into the hands of the persons appointed to do it; and, if they did it, it would have been fully proved. Nothing of the kind has been done.

The observations upon the face of the specification itself, the evidence of the man that drew it by Mr. Arkwright's directions, and the printed case confessing the fact, are decisive, that he did not mean to disclose, and that he has not disclosed it. It is not enough to give such a description,

that by a possibility some who are of the business may be able to do it, it ought to be plain and certain to common understandings, and common skill in subjects of this kind. Does it follow that because two or three are found to say they could do it, that any body else could do it? There is still so much difficulty, as shews his intention was to conceal it.

Mr. Justice BULLER.—This is a *scire facias*, brought to repeal a patent granted to the defendant, for the sole use of instruments or machines, which he represented to his Majesty that he had invented, and which would be of great utility to the public, in preparing silk, cotton, flax, and wool for spinning, and that those machines are constructed on easy and simple principles, very different from any that had ever yet been contrived; that he was the first and sole inventor thereof, and that the same had never been practised by any other person whatsoever. It was upon this representation made by the defendant that he obtained the patent now in question.

The proceeding by *scire facias*, to repeal a patent, is somewhat new in our days; none such has occurred within my memory, though in former times they certainly were very frequent.

The decision of this cause, it is admitted, is of very great importance to the public upon the one hand, and to the individual who has the patent upon the other. The value is likewise stated to be very extensive; and besides, there have been two different decisions upon the question.

It is for these reasons I chose to give the cause a much fuller and more patient hearing than I should have thought either necessary or proper, if it had been merely an action for damages between two individuals.

If I found myself under the necessity now of differing in opinion from either of the two very great and respectable authorities before whom this question has been brought, I should do it with great hesitation, and with great diffidence of my own opinion ; but, happily for you and for me, we are relieved from that difficulty, because it is admitted on both sides, that different evidence has been produced now, from that which was laid before either of the courts upon the former trials ; and, therefore, it will be for you to decide the several questions which I will state to you presently, upon the evidence which you have heard here, without regard to either of those former decisions.

The questions for your decision are three :

1. Whether this invention is new ?
2. If it be new, whether it was invented by the defendant ? And,
3. Whether the invention is sufficiently described by his specification ?

It seems to me the last is the question of the greatest importance : because, if you should be of opinion upon that question, that the specification is not certain enough, it may have the effect of inducing people, who apply for patents, in future times, to be more explicit in their specifications, and consequently the public will derive a great benefit from it ; and therefore I will

state to you the evidence upon that point first, and will endeavour to state it separately from all the evidence which is applicable to the other points of the cause.

Upon this point it is clearly settled as 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 an act of parliament, is held out for a discovery, and therefore, unless the discovery be true and fair, the patent is void. If the specification in any part of it be materially false or defective, the patent is against law, and cannot be supported.

It has been truly said by the counsel, that 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 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 question is, whether, upon the evidence, this specification comes within what I have stated to you to be necessary by law, in order to support it?

The prosecutors have attacked it in almost every part.

The first witness who speaks to the specification is John Lees, a quaker ; he takes it up, upon the feeder, marked No. 3 ; he says, the old feeder was made by him ; he has examined this specification, and thinks he could not make that feeder which is now used from the specification ; he could not make it if he followed that specification.

Hall, the next witness, says, it is not possible to make such a feeder from the specification ; he could have made nothing of it.

The next witness that speaks to any part of the specification is Hayes : he says, rollers were made by him in 1767 ; that in 1769 they were the same as this, and those used by the defendant, the one was fluted, and the other covered with leather ; first they were fluted wood upon an iron axis, the other was the same, only covered with calves leather ; he says he originally made them of a different proportion, the one to move faster than the other.

If there was any alteration that the defendant made that was material, it ought to be specified in the patent ; but, in speaking of that article, it is perfectly silent to the material, or form in which it should be made.

Then John Kay, speaking of the rollers, likewise says, one turned faster than the other ; and there was a use in this, because it was to draw the cotton finer. In this also the specification is perfectly silent.

In the plan one appears to be something smaller than the other; but how much or what were to be the relative dimensions, or upon what scale they were to be made, the specification says nothing.

They call Mr. William Doubleday Crofts, who spoke to the whole of the specification. He says, the defendant applied to him, after the patent was granted, to prepare his specification. The plan was drawn, and he employed the witness to draw up the written account: says he, upon drawing up that, I told the defendant, I thought it was imperfectly done, and that it would not answer the purpose. I asked for the former specification, and he said *that* was drawn from a model of the machine by a draughtsman in London. The defendant said, he meant it should operate as a specification, but to be as obscure as the nature of the case would admit; for, at the expiration of fourteen years, the public would have the benefit of the machine, and he thought the machine ought to be locked up; but if it were not, he wished to prevent its being taken abroad. This witness says, he has seen the specification many times since, and, notwithstanding this conversation, it remained the same as it was when he first saw it.

I begin with this evidence, because it is very material to be considered, whether the specification, in any part of it, bears a doubt, because the obscurity of it was pointed out to the defendant before he made it, and he then professed to make it as obscure as he could; his object was to get

the benefit from the patent so far as putting money in his own pocket, but as to the benefit the public were to receive, it was to be kept back as far as it could.

The next witness was Francis Ambrey, a machine maker, who has worked at it six years; he attempted to make one according to the specification, but found it impracticable, and gave it up.

The next is Joshua Wrigley; he made machines four years; he tried to do the best he could, but he could not make the machine from the plan. He says, that he tried it before there was any objection made to the specification.

The next was Thomas Leaming; he says he examined the specification; he is a machine-maker, has followed the business about ten years and a half, that he could not make it from the specification, that there was no roller in the cloth, that the fillet cylinder is deficient, and will only discharge half the cotton from the large cylinder, that the rollers have no pinions to shew their movements, neither any weights to keep them together; he could have made a machine according to the drawing, but if he had, that machine would be of no use at all.

The next witness is Immison; he says he is used to make machines from drawings, that there are very few parts of the carding machine described; the crank and one cylinder belonged to it. He says it is impossible to make such a feeder as that described in the plan, because there was no axis to it, and from the specification he should have made a parallel cylinder, and never thought

of making a spiral one; yet, you observe, that this is the one used by the defendant. As to the rollers, it don't appear by the specification; some were to go faster than others, and, from the specification, without other sources; it is impossible to say how they should be made; as there is no scale to work by, no plan to go from, it is impossible to know how to do it.

Upon his cross-examination, he says, as to the feeder, there is nothing but the want of a roller which makes that defective; that a roller is necessary to give a regular direction to the work, that it will not answer without it. He says, from the knowledge he has now, he should add a roller if he was directed to make the machine. But, gentlemen, that don't prove the specification to be sufficient; because, if a man, from the knowledge he has got from three trials, and seeing people immediately employed about it, is able to make use of it, it is his ideas improve the plan, and not the merit of the specification; if he makes it complete, it is his own ingenuity, and not the specification of the inventor. He says, as to No. 5, it will not work five minutes together before it will be entirely full of cotton: he is asked, supposing the cotton was to be spread upon the feeder only the breadth of the fillets, would it have that effect? He says it would not do even then.

The next is Benjamin Pearson, who says, the cylinder the defendant uses was a worm, which stripped the whole off the large cylinder, and they spread the cotton the whole breadth.

The next is Thomas Barber ; he says he has been used to make machines from drawings ; that he could make the limbs of this, but he does not see how to put them together from the specification ; that there is no connection, no moving part or principle, no way of putting them together—nothing to set the rollers agoing. That if there is no axis, the feeder might move without it, but not with any regularity ; that the fillet cylinder is not connected with any thing, the parallel filleted cylinder will not make the edges of the rovings good ; it would not be carding, part of it would not be carded ; that it must leave the cotton upon the great one, and must clog the machine. That, with the assistance of the written specification, he could not put the machine together.

John Johnson says, the specification is not a sufficient description of the machines that were produced in court ; he has compared them with the specification and writing, and he is satisfied in his mind they could not be made from them : that No. 3 is in want of a roller, and therefore defective ; that No. 4 is pretty well described ; that there is no description of the rest of the machinery sufficient to make one by. That he is a cotton engine-maker. He says there is not sufficient directions to put the parts together ; that one part is directed to be put to another, but there are chasms between.

The next is Mr. Cumming ; he is a watch-maker ; he says that he has seen the machines more than once. He says it was mighty easy to have given a description of the machines, to bring

it within the scope of a common mechanic ; that is not done : that, putting himself in the situation he first saw the specification, he could not comprehend it at all ; that now he has examined it so much, he could not make it from the specification, informed as he is ; so, you see, his knowledge is from other means. At first he could not comprehend it ; that if he had employed an artist to make the machines, he must have been asked a great many questions which he must have resolved, though he never should have been led to it by the specification ; “ and if by accident I had hit upon the same machine the defendant has made, I should not have known it was that meant by the specification.”

This evidence is as strong as any evidence that could be given upon the point. He says, No. 6 would not give any instruction ; that he could not find out by it that Mr. Arkwright meant the rollers should be fluted, and that they would have relative velocities ; that he has no authority for the motion by the specification, and it never could have occurred to him to have looked at the old machine ; for he thought it an entire new invention, and not depending upon the old description. He says, if No. 6 was representative of the roving passing from it into No. 7, which is the can, he should have understood it ; but No. 7 is represented as a solid, and not a hollow axis to admit any thing else, and he thought *that* a want of evidence of its being an original invention. That it was very easy upon paper to distinguish the spiral from the parallel,

but these are represented as parallels. He says, he never understood till that time, Nos. 7, 8, and 9, would any of them serve the same purpose. He says the principal cylinder appears by the specification to be the parallel cylinder, and, says he, "if I had been conversant with the former machine, and even known the spiral cylinder had been used in that, yet I should have thought this plan meant to distinguish it from the spiral cylinder." If he is right in that, which don't seem to be contradicted by any witness that I can find, there is nothing else to be said about this plan, but that it is calculated to deceive and mislead. If calculated to represent the cylinder made use of in the old machine, it might have been done by reference, and then the argument would have been proper, which the counsel for the defendant pressed; but if the defendant meant to make use of the parts of the old machine, he, by his description, has misled every body who was to make this machine now in question; because he has in his plan made the specification directly contrary to that used in the old machine. And therefore it is for you to say, (if Mr. Cumming's reason be not conclusive in itself,) whether, if there be one thing known, and a man gives a design of a different thing in contradiction to that, and yet means that the thing known should be used, is it not misleading mankind? This witness says there is nothing in the specification that puts No. 2 out of the question: he should have thought by finding it in the plan it was to be of some use, but he could imagine none for it.

The next witness is John Viney; he says, a gentleman brought the drawing to him; he observed there was no scale, and it was not possible to form any idea of the dimensions of any one part of it. That within three weeks from this time, two other gentlemen brought it to him; that his reply was exactly the same, that he could not pay attention to any thing so totally void of any sort of means for understanding it: they produced the description of the drawing; that he reviewed it at two or three different periods; at last, says he, I was left totally ignorant of the means of constructing the machine this was meant to describe, as ignorant as if I had never seen it. He says, he never saw a cotton mill, but, from his knowledge in general, he could form no idea of any man being capable of working from drawings that had no scale.

Thomas Walford says, he is conversant in filleting machines; that from the specification he could not have made the machine; it wants the means of communication; he takes No. 3 to be more like a worm than any thing else, from the appearance of it, and he could not tell how to apply it: that he could not put all the parts together; that it was a very easy matter to describe them so as to be understood, that the spinning machine was accurately described, and this is not at all so; that there is no scale to go by,

Mr. Harrison, who was with his father at the experiments for the discovery of the longitude, told you, that he has examined attentively the drawing, and the explanation, and the machine;

that this machine is not described by the drawings; he says he could not make them from it, but they might have been very easily described; he says, if he had added the roller to No. 3, that would have been his own invention; that he never had seen a place for No. 2, and so many things are thrown in, which have nothing to do with the business, he thinks it must have been for the purpose of perplexing; he says, he concluded No. 6 was new, and did not refer to the first specification; and he gave the same reason that Cumming did about the rollers.

Mr. Ewer, who is chairman of the committee of mechanics at the Adelphi, says, that he is acquainted with mechanics in general; he says, if a person confines himself to the specification solely, it is impossible to make the machine perfect without exercising his own inventive faculties; he does not think a person could make a machine entirely by that specification; he says No. 3 has no roller, that No. 5 is exceedingly imperfect; he makes the same objection the others do about the filleted cylinder; that he has seen a great many specifications, that he never saw one so obscure as this; some of the drawings are in perspective, the others only sections, and that those that are the most important are the most confused in the description.

Mr. Pilkington says, that Mr. Arkwright gave him some cases which he was to present to the House of Commons, and desired the witness would read them, and promised to send him more by his servant, which he did. Those which were

delivered by the defendant seem to me to be material; because they shew what the defendant's sense of this business was immediately after the first trial. It has appeared from what has been said on both sides, and it was so stated in this case, that he was beat upon the first trial upon the subject I am now stating to you, that is, *the specification*; he admits in that he has *not properly specified* how the machine was made, and he says, he purposely (in prevention of an evil, that foreigners might not get them,) omitted to give so full a description of his inventions in the specification, attending the last patent, as he otherwise would have done; this he admits, and he goes on and states a trial in Westminster Hall, in July last, at a large expence, when solely by not describing so fully and accurately the nature of his last complex machines as was strictly required by law, a verdict was found against him; he bows with the greatest submission to the court and the verdict against him; and he deprecates the favour of parliament.

Now, in a case where an invention is lucrative to so enormous a degree as you have heard, and where the verdict was given against him upon a particular point; had he not been most thoroughly convinced that the verdict was right, or if he could by any explanation have supported his specification, is it to be conceived for three years and a half he would lie by, and totally lose the benefit of his patent? But excepting this application to parliament, (which does not go upon the grounds of his patent being good,) by

abandoning it on account of his own fault, and desiring favour and bounty there, he relinquishes the patent for three years and a half.

This is the evidence upon the part of the prosecutor *against the specification*, and it is material to see a little how the defendant's counsel endeavoured to support it. Here is a specification, that states ten different instruments; it is admitted by them, that as to No. 8, it is of no use, and never was made use of by the defendant in his machine. It is also admitted, No. 9 stands exactly in the same situation, as this could not be put into the machine. This is a little extraordinary; for, if he meant to make a fair discovery, why load it thus with things that they make no use of, and which are totally unnecessary? That could answer no purpose but to perplex. But, say the counsel, we will shew you that there were two machines, and they were two distinct things; for, say they, Nos. 3, 4, and 5, are the material parts of one machine, and those alone afford all the information necessary. Then, besides that, there is the roving machine, which consists of Nos. 6, 7, and 10, joined together. If that be the truth of the case, and there are to be two distinct machines to be made up by parts only of the instrument specified in this plan, let us see whether it is so said in the specification. There is not a word of it. It begins with the first, or No. 1, which is a breaker or beater of seeds and husks, and a finer of the flax, hemp, and other articles, which are to be prepared for dressing. Then, says the counsel, there was a difference as to those things,

because the hammer was proper for the hemp, and not proper for the wool. If there be that difference, it was necessary for the defendant to state it in his specification; but he has made no distinction; he has left to those who are to learn his art and secret, to use the same machine for every part of it; he has not distinguished between the cotton and the flax. The specification states, that it is proper for every thing. Is it so? It is admitted it is not. Is there any thing which states that these parts are for two machines, and how they are composed? *That* the specification is totally silent about. What is there in the specification that can lead you to say you must make use of three things for one of the machines, and three for the other, and which three for one or the other? And even were it so, what is to become of the other four? If those are of no use but to be thrown in merely to puzzle, I have no difficulty to say, upon that ground alone, the patent is void; for it is not that fair, full, true discovery, which the public have a right to demand from an individual, who, under the sanction of parliament, gets so great a reward as a monopoly for fourteen years together.

However, upon the part of the defendant, they have called several witnesses, to shew you it is perfectly intelligible, and that they can make the machines from this specification. The first is Richard Pridden; he, you observe, is partner with the defendant's son, and the defendant's son does actually work this machine;—says he, No. 3 is the feeder described by the patent, and that was

not in use before to his knowledge ; he can only speak to his knowledge : says he, No. 6 are the rollers, with these the cotton is sized and roved ; this is done with less labour than before, and better, because the lengths are longer.

The next is Charles Wilkinson ; he says he lived at Nottingham, kept an academy, that he was applied to by Mr. Arkwright to draw the specification ; that he had no directions from the defendant to make it obscure, and he did it to the best of his skill ; he had seen the old machine before ; he thinks from this specification alone it might be made ; he is not acquainted with the cotton business, but the essential parts are described ; but he says, he looks upon the rollers to be the essential parts of the old machine ; as to the roving box and the crank, he took them from a model of part of the machine, and all the rest from the defendant's description ; as to a scale, he says a thing drawn in perspective does not admit of a scale ; when you draw sections, it is necessary, he thinks it is necessary, to have a scale to shew the different proportions of the rollers.

Now you see this man took his information, or a great deal of it, from the defendant himself ; and supposing it true that he or any other person instructed by the defendant, and having seen what he does, can make a machine from the specification ; yet that will never support it, unless other people, from the specification itself, who have any knowledge in the business, can also do it. This is not the case with this man ;

but the last thing he says is also a material thing against the patent; for he says, for different purposes, different proportions of the rollers are necessary. How is any man to find that out? It is not said in the specification it must be different in one case from the other, and that you are to have different rollers for hemp, or for cotton; all this remains to be the subject of a future discovery.

Mr. Samuel Moore says, he is well acquainted with mechanics, that he has been examined at both trials, that he never saw a cotton machine till a day or two before the first trial; he says, he has seen the old machine in use before; he says these are rather additions to the machine, than a whole and complete machine itself. Now, you will observe what he says as to the making of it: "I believe, with due attention to the old machine, and an accurate attention to the specification, I could direct a skilful artificer to make the machine." This is all that a very ingenious sensible man can say of this specification; he has examined the instruments and machine, and seen a great deal of it between the trials; and at last, he believes, with all the extreme caution that I have mentioned to you, that he could direct a skilful artificer to make the machine: he says, that as to No. 3, a piece of cloth, with cotton, or any other material that was to be carded, rolled up in it, would certainly move much better, and more steady with a roller within side, but it would do without it. If wanted, he thinks it would

easily occur to a mechanic to put it in: that is, that a sensible man would have understanding enough to supply any defect in this specification: but in this case it proves the specification is insufficient; it will not do of itself, but wants something to be added: it is deficient, and there is nothing in the specification that imports there should be a roller in it.

He says the crank is clear; as to No. 5, that it is intelligible to him; but says he, if I was bound to proceed according to the form of the plan, I certainly could not direct a spiral cylinder.

According to this account, how is the machine to be made? the question is, Whether that machine can be made hereafter, by persons that follow the trade, from this specification? The defendant uses a spiral cylinder; is that to be found out by the specification? Why, no; Mr. Moore says it cannot be done. The specification states, that there must be parallel fillets, and the defendant uses a spiral one: he admits it is so material to the case, that if it moved in a parallel form, it would choke the work; he says it does look as if it were intended to have a horizontal motion by the length of the spindle, but he admits there is no such description in the specification; he says, upon the former trial, the cotton was spread the whole breadth, and then it choked; but now he sees it is put in fillets. There is no necessity for putting it the whole breadth of the cloth; he says he has read the verbal explanation, and it appears from the drawing and explanation that No. 6 is the section of the rollers.

Now, it is admitted by the former witnesses, if there are sections of rollers, there ought to be a scale; and there is no scale; there is nothing in the plan to shew the different comparative velocity of the rollers, but there will be a difference, because the one is larger than the other in diameter.

You see how that applies to this part of the evidence. There is nothing, says he, that shews what the difference of velocity should be; *that* remains for experiment hereafter. Is that the case with the defendant? No, he knew to a certainty what it was. The man that comes to give an account of the invention says, I had calculated it, and the difference of the velocity was to be as five to one; this is the way I made my rollers: now the defendant has not said a word of that in the specification; in that he has kept back the knowledge he had as to the size of the rollers and velocity, and it is left to people to find it out as chance may direct.

He says, he understood pretty well what No. 7 was; but that was better explained by the machine itself. No. 10 he don't think is a difficult matter to account for. He says, that knowing the original machine, he could have put the machine together.

He thinks now he could do it: but that does not apply to the question at all, if he means he could now do it from the four instruments, and the old machine, which the counsel have told you was all necessary to be understood, for that is not the thing described by this specification.

Upon his cross-examination, he says there is

nothing in the specification which imports the cotton is to be laid on in fillets, *that* depends upon the rollers. As to the velocity of the rollers, that may or not depend upon their size; he says he is not a practical mechanic; he thinks there is no difference between the rollers of the first and last machines; he says, from the sections of the rollers, he could not determine what diameter the rollers should be for making any particular thread; he says, Nos. 6 and 9 are very much like the old machine; No. 2 is not used in this machine at all, he does not know what it alludes to; he thinks the can might do without rollers, but much more ineffectually without the rollers: he thinks, upon the whole, it is sufficient for an intelligent mechanic now to make the machine by it.

The next witness is Mr. James Watt; he says, having known the machine, and having the specification in his hand, he thinks he could make such a machine as this; but when the specification was first put into his hand, he was told No. 1 and No. 2 were not used in the cotton manufactory. Then this man did not act in the same way the others did that were called for the prosecutor; because he had other knowledge conveyed to him more than he could collect from the specification. He did not immediately conceive what was meant by No. 5; he was not acquainted with the term fillet cards; upon reading the specification he did not conceive there was the old machine in it; he, by his own account, was misled, and formed a different idea of the speci-

fication and plan from what the defendant used. He says No. 3 would do without a roller, but if it was necessary, there could be nothing so common as putting in a roller; that it must occur to any man of common sense; from the plan he had not an idea the cotton was to be put in fillets; as to No. 2, he should have conceived *that* a separate machine; he admits the hammer, No. 1, is not a new invention, and that the rollers used in the roving and spinning machine perform the same thing; he says, there is not a word about the wheels to turn the rollers; he says, to effectuate the different purposes, they must be of different diameters, or the same if they are differently moved by the wheels.

The next witness is John Stead; he says he has seen the specification and the old carding machine, and knowing that, he believes he could make this machine from the specification; that he has done part from the drawing; that what he did was to try experiments; says he, my object was to make the new machine, but to avoid his patent. He has no doubt but he could have made the whole; he said it was necessary to find out something that might be clear of the patent, and what he made was by substituting different things, meaning to make a machine that might not come under the description of the patent; he says the specification so describes it, that he has no doubt whatever of making it. He says the roller in the feeder does not appear, but the purpose may be answered without; he has seen a mill which he was informed was built under the patent, and that

is with a roller. The spiral card does not appear. As to the rollers, he says there must be a different velocity, but what that might be he cannot tell; and he believes no one set of rollers, of different diameters, could be ascertained for all sorts of work; he says the size of the rollers is not specified, and they could not specify that, because there must be different rollers for different sorts of work.

Then, according to his account, the defendant has not stated that which was necessary for any one thing. It is not so stated as to enable the person that reads that specification to know what size they are to be for any one thing to which this patent relates.

The next witness is Thomas Wood, who was partner with Pilkington: he says he has examined the specification; he put Nos. 4, 5, 6 and 7 together, and that machine he has worked ever since; he don't recollect that the defendant used any thing else. If that be true, it will blow up the patent at once; he says he believes nobody that ever practised would find any thing necessary upon this paper, but the Nos. 4, 5, 6 and 7; he should look after no others.

Now, if four things only were necessary instead of ten, the specification does not contain a good account of the invention. As to the can, he made use of it without rollers at the mouth; he thinks it answers just the same without it.

William Allen says, Stead furnished him with the specification and drawing a fortnight before the last trial, and desired him to make a

model from the drawing and specification, which he did, which answered much the same for carding and roving; but, says he, I had another friend I talked to, that was one Whitmore; he says the specification is competent to enable a workman to complete the machine; he says it occurred to him they were moveable rollers which were described to him as No. 6; he says, in order to procure different degrees of fineness in the roving that passed between those rollers, it is necessary there should be different degrees of velocity.

William Whitmore has made models of machines for different purposes. He has seen the drawing and the specification; Stead shewed it to him: that he undertook to make the machine for carding, that he had not even the knowledge of the old machine at first. He says, the defendant employed him to make a model, and that Allen saw his model before his own was finished; says he, I had two or three hours conversation with the defendant after I had begun the model. I had a description of the old machine, but I think I could have done it without.

The next witness is Dr. Darwin; he says he had seen the machine previous to the drawings; he thinks he might have made it from them; he says the want of a scale was not very material, but it would have been worse if they had been intended for different purposes; he says the rollers must have been of different diameters for different purposes.

John Hagget tells you he has known the defendant fourteen years; he says he has seen the

specification, he thinks it is a sufficient description for a person acquainted with the old one to form a new one; that he was employed by Mr. Arkwright from the first beginning of these new machines, and trying experiments; that he gave him directions sometimes with chalk upon a board, and sometimes by crooking of lead and wire as models; he says he don't remember hearing him say he received instructions from any body else.

Then Thomas Bell, a joiner, is called; he was concerned for the defendant about five years, in making parts of the machine that were invented from time to time; he says the crank, No. 4, he had never known to be used by any person before the defendant.

This is the evidence that relates to the specification upon the one side and the other. You see, upon the part of the prosecution, they have called to you very ingenious men, that seem to be much beyond what are called common mechanics in life; they have all told you it is impossible for them to make the machine according to the specification.

Upon the other hand, several respectable people are called upon the part of the defendant, who say they could do it; but there is difference in their description; most, if not every one of them, have looked at and seen how the machines were worked by the defendant, and have got their knowledge by other means, and not from the specification and plan alone. Besides, they admit the manner the defendant works it is not consistent with the plan laid down, particularly as to

the cylinder, a particular part of the business; for Moore says, this upon the face of it must be taken to be a parallel, whereas that which plainly appears to be used is a spiral; besides, after all this, they have spoken, most of them, in a very doubtful way; particularly Mr. Moore, who qualified his expression in the way which I have stated to you; and the others qualifying their expressions, saying, they think, upon the whole, they could do it. Suppose it perfectly clear they could, with the subsequent knowledge they had acquired, yet if it be true, that sensible men that knew something of this particular business, and mechanics in general, cannot do it, it is not so described as is sufficient to support this patent. It will be for you to say, upon this part of the case, whether you are satisfied this specification is such as, with the plan, it may be made from it or not, taking the old machine in to its assistance, which, by the by, the specification has not taken notice of as known. If you think it is not sufficiently described, that alone puts a complete end to this cause, and then it will be unnecessary to trouble you any further.

As to the other points, they are two; first, whether it is a new invention; and in the next place, whether it was an invention made by the defendant.

Now, if in your opinions it is material to go into these points, I think the law in general is very different on them from what I have stated in the specification, because, in the case of an invention, many parts of a machine may have been

known before, yet if there be any thing material and new, which is an improvement of the trade, that will be sufficient to support a patent; but whether it must be for the new addition only, or for the whole machine, would be another question. It seems to me, not to be necessary now to state precisely how that would be, because this patent is attacked upon the ground that there is nothing new; therefore I will go over the articles one by one, and see what is stated upon the different articles which are here mentioned.

As to No. 1, see how the defendant has stated that in the specification; that is stated to be a beater or breaker of seeds, husks, &c. and a finer of the flax, hemp, and other articles, which are to be prepared for dressing, in which (a) is a wheel with teeth, which, by acting upon a lever, raises the hammer (c), the lever being moveable upon the centre (d).

Now this, it is said, is not stated by the specification to be joined to any thing else, and therefore it must be taken to be a distinct thing. It is admitted, that it is not a new discovery, for Emerson's book was produced, which was printed a third time in the year 1773, and that is precisely the same as this. Several other witnesses speak to that. Upon the part of the defendant there is no contradiction; and therefore I will pass it over without going over the rest of the evidence, as clear that it is not new.

Then the second thing is an iron frame with teeth (a), working against a lower frame with like teeth (b). It says, this lower frame is firmly con-

nected to a wooden frame, by means of the screws (c, c,) and the upper teeth are made to act against the lower, by means of the joints marked (d).

Let us see how this has been used. Says Benjamin Pearson, I never saw it used by the defendant at all, as I recollect; if I ever saw it used, it is no part of the invention; if I have, it is more than I know: I worked with him seven years after the patent was granted; I don't know that he ever used it at all.

The next is Joshua Wrigley—he says, I never saw No. 2 used in the business; he has been in the business four or five years, and worked for several gentlemen, not with the defendant, but this was not used. Indeed this was likewise laid out of the question by the counsel for the defendant, for that, he said, had nothing to do with it.

If it had nothing to do with the machine, it is very difficult to say how, with a good motive, it could ever come into the specification or plan.

The next is No. 3. That is described to be a piece of cloth with wool, flax, hemp, or any such materials spread thereon.

No. 3, says Wrigley, I have seen work; that is the feeder.—This he produced as the feeder used before the defendant's patent, and performs exactly the same operation as the defendant's; and it is better, because the cotton needs no spreading upon a table, neither does it require taking the cloth off and on, and, according to the defendant's, you must take it off every time the cloth is filled. He says he has been acquainted with most of the cotton works, and the old feeder is most used.

He says, the specification don't shew how No. 3 is to be worked, nor how the cotton is to be taken off, and it shews no roller nor centre.

The next witness is John Lees: he says he is the inventor of the old feeder, that he made it in 1772, and in August 1772 he worked with it, and that it is now commonly used in his country. He has never seen the defendant's used, but the description of the defendant's is the same as his.

This also shews, first of all, that it is no new invention.

Secondly, It is not invented by the defendant; for this invention is spoken of as used before the time of the patent, and

In the next place, it is proved to you not to be the invention of the defendant, by the person who actually invented it.

Thomas Hall says, he worked with Lees at the time he made the feeder, in July 1772; that he never saw or heard of it before; that it is better than the defendant's, and much used now.

Henry Marsland tells you, that he used the feeder in 1771; that in 1772 the defendant came to see his works; that he made no objection to his using the feeder. These are all the witnesses that speak to that article, except Immison; who, I see, speaks to it likewise: says he, as to that; there is an objection to it, for the want of a roller, but it is proved by the other witnesses it might be made use of without a roller. The defence to that is; though there is no axis, yet it might be made use of, though it would not move with the

same regularity, and the work could not be carried on so well as it should.

The first witness upon the part of the defendant is Richard Pridden, who has been in the business for preparing wool and cotton for spinning, fourteen years; he says, the feeder used in this machine was the feeder described by the patent—he don't know that it was in use before. Mr. Moore treats it as an addition only; but he admits the roller is proper, and yet it is not stated.

Mr. Watt says it would do without the roller; but, if it were necessary, a man must be a great idiot if he has not sense enough to discover it.

The evidence for the prosecution on this article is not at all contradicted; and it is shewn that it was invented by the man himself, who proved it by John Lees,—that is not contradicted by any one witness whatever for the defendant; upon the contrary, he is confirmed by one of the witnesses, Hall; and Marsland proved he used it long before the time of the patent. The next is No. 4, that is the crank: Mr. Marsland says, that after he had used the crank, the defendant objected to it; therefore, says he, I gave it up.

But Elizabeth Hargrave tells you, this crank was first used by her husband (and he died about eight years ago) in partnership with James at Nottingham; that he worked by himself, and took great pains about the crank, and completed it so long ago that he began working it thirteen or fourteen years since. She says he carded with it, and took the carding off the cylinder by such

a crank as is now produced; that it took it off exactly the same; that he used it in his factory. She says, the defendant was then in business, and lived at Nottingham; that she never saw the crank any where but in her husband's room. She afterwards told you, when that crank was finished, it was carried down to the shop thirteen years ago, and above, and he there worked with it; and when her husband invented it, he employed Whitaker, a smith, to put it in iron.

Then George Hargrave says, his father used the crank in the public shop where all the men worked; this was in 1773, when he came from Lancashire to Nottingham. After the time that he got there, his father had it in public use; that one Bird also used it at the same time in his factory.

It is proved by these witnesses, first, that it was invented between thirteen and fourteen years ago; and that it was not Mr. Arkwright, but Hargrave, who invented it; and it was publicly used in two factories, where men came to work.

If that be so, that will put an end to this article, namely, the crank.

George Whitaker says, he is a smith and frame maker; that he made many cranks; that Hargrave came to him, and he told him he wanted such a machine, and the purpose he wanted it for; and by his directions, and his own judgment, he made a crank like this which is produced, only turning the joints the other way; that it took off the cotton the other way from the cylinder, but exactly the same in other respects; that some

call it the taker off, some the comb, then it got its name. He says, he made some for one Hudson, three for Grimshaw, some in 1773, and one for Lister; and he says, he has made near twenty in the whole. He says, they got into very general use before 1775. It was used in the public shop of James in 1773; that it was worked so much, that in January 1774 the witness repaired it; there were several brought to repair in 1774, and they were chiefly in use after 1775; that they were never left off as he knew of.

The next witness is Richard Hudson, who says, he has made many carding engines in 1774, he thinks some before, but is not sure; these cranks were used then by him; there were cranks in all the engines, and the same as these; that he employed Whitaker to make the cranks; that he made one for Brotherton, that was in Scotland; another for Smoke in Nottingham; and he made them for Rawson and Co. at Nottingham; and one for Lister, for carding wool.

Then John Bird says, in 1773, he had a crank of his own, used in his own shop, in his cotton manufactory at Nottingham.

Thomas Chatterton says, in January 1774, he saw one at Mr. Bird's at Nottingham; that Hudson made it; and he used it in his manufactory in April 1774, at Ashbourn.

Then Thomas Ragg says, that the cranks were in public use before 1775. He was apprentice to Whitaker the maker: he speaks to the time.

Then as to this article upon the part of the defendant, Mr. Moore contents himself with saying,

the specification is clear enough as to that; his evidence does not apply to this part of the case.

Wood says, he never saw the crank in use before Arkwright's.

John Haggett says, he was employed to make one for Mr. Arkwright, that he never knew it used by any person before.

And Thomas Bell likewise says, he never knew it used before Mr. Arkwright used it.

Some of the witnesses have proved them to be made in great numbers, and used in different factories publicly, and they have proved it by the persons who made them.

Upon the part of the defendant the witnesses never having heard of it, may be perfectly true, and yet no contradiction to the evidence for the prosecution.

As to No. 5, the filleted cylinder, Mrs. Hargrave speaks of it, and says, the original cylinder was covered all over with cards; that her husband used it for ribband filleting; that he used it about fourteen years ago, but he never brought that to any shop or factory; he thought the other better, and carried that to the shop with the crank.

Then George Hargrave says, it had no fillets, that he recollects, in 1773; but you observe he did not come till 1773 to Nottingham.

Then Robert Pilkington says, the first engine he was concerned in was made by Richard Livesay and himself in 1770; that it had a filleted cylinder; that he got one that was striped in the fillets like this; that he had a cylinder that was quite covered, that was meant for tumming, the

first operation in carding; that it was one continued carding, instead of so many rovings or lengths; he does not know that the filleted cylinder will answer any purpose the other does not.

The next is Thomas Hayes; he says he has made engines; that he has seen the defendant's about twelve or thirteen years ago; and he says his cylinder was covered over with cards, the same as the one now produced. In 1767 he speaks of making the rollers, and says, he made the machine that made continual roving, as this does; that he had a cylinder like that which was produced, to take off the cotton from the other; this was twelve years ago; he sold them to manufacturers for use; that he made his machine for spinning and roving; that he made it rove and spin with the same rollers, by doing it twice over in the manner he shewed to you.

Then upon the part of the defendant, as to this article, Wood mentions at first, and his evidence falls in also with what was said upon the part of the prosecution; that in 1773 it struck him, the cylinder might be entirely carded, and he did it so, and in 1774 he made a full trial of it; he had parallel carding in 1774; he did not make much difference between the roving and spinning machines.

He also proves it used long before the defendant's patent; he confirms what was said by the other witnesses: and what the other witnesses have said against it, is nothing at all to this article; for here it is proved to be used in both ways,

in the manner the defendant has used it now, and likewise being carded quite through.

Now if it was in use both ways, that alone is an answer to it; if not, there is another question, Whether the stripe in it makes a material alteration? For if it appears, as some of the witnesses say, to do as well without stripes, and to answer the same purpose, if you suppose the stripes never to have been used before, that is not such an invention as will support the patent; upon that ground it is fully answered.

Then it comes to No. 6. Hayes says he made use of the rollers in 1767, and in the same manner two years after as these were; one was fluted wood upon an iron axis, the other the same, only covered with leather.

Hayes says he tried the spinning of cotton by the rollers; he employed one Kay, a clock-maker from Warrington, to make a small model.

John Kay says, he told the defendant that he made these things in the year 1767.

Says the witness, the discourse came up about spinning cotton by rollers, and he said, he thought it would answer very well. Says the defendant, it will never answer, many have ruined themselves by it; notwithstanding Kay persisted, he thought he could do it if he had money. The next morning before he was out of bed, the defendant came to him, and asked if he could make a small model. He came again, and the witness got the model from Hayes, and told the defendant that he and another person had tried it. Then afterwards he says, he went to the defendant to

Nottingham, and worked with him upon the discovery found out by himself and Hayes.

Kay is confirmed in it by his wife Sarah Kay.

The next is Neddy Holt. He says he was employed in 1774 to make these rollers; that the defendant came to him and told him he was an intruder upon his patent, because his roving was the same as his, the defendant's, spinning.

This, I think, is the evidence as to the 6th article.

Then for the defendant, Pridden says, that that which is described as No. 6, is the same that is used, that is, the rollers; but it is admitted it is not stated in the specification of what size they ought to be; and I think the rest of the evidence upon this article goes merely to the description in the specification, and not as to its being a new invention, so that that evidence stands also uncontradicted.

As to Hayes and Kay, there is no contradiction at all to the evidence they have given, namely, that they were made before, and used in the different ways I have stated to you, and that the defendant got the secret from them.

Then the 7th article is what they call the can. Holt says, the only difference between the two, the spinning machine and the present roving machine, is, that the latter has a can; and indeed, that at one time was admitted by the counsel for the defendant.

If it be so, it brings the case to a short point indeed; for if nothing else is new, the question is, Whether it is material or useful? The wit-

nesses upon the part of the prosecution say, it is of no use at all. In the first place, they had that before which answered the same purpose, though not made exactly in the same form : it was open at top, it twisted round, and laid the thread precisely in the same form, and had the same effect this had ; so if it was new, it is of no use ; but they say it is not new, for though it was not precisely the same shape, in substance it was the same thing, that is not contradicted.

That part also stands without any contradiction upon the part of the defendant ; for the defendant's witnesses satisfy themselves with telling you they think it intelligible, and it might do without the roller, though it might not be so effectual as with the roller. It is admitted by several it could do without ; that appeared from the experiment made ; they shewed you by one of the engines how it did with the roller, and how without, and that it was done without just the same as with it.

As to Nos. 8 and 9, it is admitted those are entirely out of the cause, and may be used, says the counsel for the defendant, instead of No. 7.

The question they make is, the specification does not import that Nos. 8 or 9 was necessary to be used, and because No. 10 is to be fixed to No. 6 to work Nos. 7, 8, or 9. Now the words of the specification are these : ' No. 8 is a machine for twisting the contents of No. 6, in which (d d) is a frame of iron ; (b) a roller, upon which a bobbin is fixed ; this is turned the same as No. 7, that is, by a dead pulley, or wheel fixed to a wooden

frame at (G). Then No. 9 is a spindle and flyer fixed to No. 6, for twisting the contents from (b) in No. 6. (a) is a pulley under the bobbin, which hath a communication by a band to No. 10 at (d d), it being a conical or regulating wheel, which moves the bobbin quicker or slower, as required.' This is the account given of those two, namely, that nothing imports to be used with No. 7, but, on the contrary, that was to be used instead of them; therefore you may take any one of these things, and it will do.

The first question is, Whether that is the fair construction of this specification? Suppose it was so, it is perfectly clear the defendant has never used either of them, and some of the witnesses tell you they cannot use them at all. One tells you they cannot be used, and therefore it is a little unfortunate they got into this specification, if nothing more was meant than to make a fair discovery of what was useful; but in this manner the description is given.

As to No. 10, nothing is said about it for the defendant. First Mr. Moore said, it was not difficult to conceive it; but there is no witness that says at all what the use of it is: so this seems to stand without any evidence at all.

Gentlemen, thus the case stands as to the several component parts of this machine; and if, upon them, you are satisfied none of them were inventions unknown at the time this patent was granted, or that they were not invented by the defendant: upon either of these points the prosecutor is entitled to your verdict.

If upon any point you are of opinion with the prosecutor, you will find a verdict for him.

If upon all the points you are of opinion for the defendant, you will find a verdict for him.

Verdict for the Crown.

10th November, 1785.

Mr. Serjeant Adair moved the Court of King's Bench on behalf of Mr. Arkwright, for a rule to shew cause why a new trial should not be granted.

The learned Serjeant, after mentioning that this question had been the subject of discussion in two trials prior to that which was the subject of the present application, and that each had turned upon the sufficiency or insufficiency of the specification, stated from an affidavit of Mr. Arkwright, that he acquiesced in the verdict against him on the first trial for a considerable time, conceiving the law to be stricter in that respect than he was afterwards advised it was. Upon being given to understand, that there was a different construction of law upon the point, he thought it right to make another trial upon that principle; in consequence of which, he brought a new action, and obtained a verdict. That the sufficiency of the specification, upon the second trial as well as the first, was the only point gone into before the court; and that upon the *scire facias* being brought against him, he was led to suppose that his opponents had already brought forward all their artillery against him, and that the subject

of the *scire facias* was only to procure, in another shape, a revision of the same question.

He was led to suppose, that upon two trials, upon a question of such importance, no evidence that appeared material to the party would have been kept back, and he swears that he did not expect them to adduce, after so many trials, evidence to attack the originality of the invention. He went, therefore, into the defence merely of the specification, and came to trial upon the *scire facias* altogether unprepared as to the novelty of the invention, except so far as the witnesses called to explain the specification could accidentally speak upon the subject. It however turned out upon the trial, contrary to the expectations of Mr. Arkwright, that the chief force of the evidence was against the originality of the invention, which was a considerable degree of surprise to Mr. Arkwright, who was unprepared with witnesses to contradict it.

The present application to the court rests upon this ground, that Mr. Arkwright states in his affidavit, that for the reasons before mentioned, he was not prepared with that evidence which he would have adduced, and should be able to adduce upon a future occasion, if the court will give him an opportunity, in order to contradict and explain the evidence against him.

Besides his own affidavit, he will produce another affidavit, the purport of which is to state the evidence that could have been given to contradict the evidence of Kay and Mrs. Hargrave, and

some others that were material upon that part of the case.

Another point upon which Mr. Arkwright states he was not provided with evidence, not conceiving it a point to be litigated, was, there were some articles in the specification which were supposed to be immaterial, and to be inserted only for the purpose of puzzling and perplexing. It can be proved that some or most of the parts were material, when the machine came to be applied to wool instead of cotton; and the others had actually been used by Mr. Arkwright and his workmen. It was therefore necessary to insert them, in order to cover the whole of what he conceived his invention. It was stated that many of the witnesses called to that point, were in the original brief upon the first trial. If so, upon what ground but that of deceiving and reserving a masked battery of evidence, could it be possible, a party in a matter in which he was so much interested, would not discover it?

If the whole of that evidence had been adduced upon the first, or even on the second trial, there might have been an opportunity, in the further discussion of the business, to procure an examination of that matter, by fresh evidence, or some other way: they ought not to have waited till the trial by *scire facias*, which is the last stage the law admits; the event of which, in the nature of it, is final.

LORD MANSFIELD.—It is very clear to me, upon your own shewing, there is no color for the rule; the ground of it is, if there is another trial,

you may have more evidence. There is no surprise stated; no new discovery; but upon the material points in question, you can give more evidence. There were two questions to be tried, the specification, and the originality of the invention: there has been one trial in this court, another trial in the Common Pleas, where this patent has been questioned, and this proceeding is brought finally to conclude the matter; for it is a *scire facias* to repeal the letters patent. The questions to be tried, are stated upon record: there is not a child but must know they were to try the questions there stated; they come prepared to try them; they have tried them; and a verdict has been found, which is satisfactory to the judge; and now you desire to try the cause again, only that you may bring more evidence. There is not a color for it.

Rule refused.

14th November, 1785.

The Court of King's Bench gave judgment to cancel the letters patent.

THE KING V. ELSE.

S. C. 11 221-12. 100. note.

Sittings after Michaelmas term, 1785.

In this case the patent was for a new invented manufacture of lace called French, otherwise, Ground lace. The specification went generally to

the invention of mixing silk and cotton thread upon the frame. On the part of the prosecutor, it was clearly shewn that, prior to the patent, silk and cotton thread had been used together, and intermixed upon the same frame; and the defendant's counsel acknowledged the fact, but said, he could prove clearly that the former method of using the silk and cotton thread was quite inadequate to the purpose of making lace, on account of it's coarseness, and that the defendant alone had invented the method of intermingling them, so as to unite strength with firmness.

Mr. Justice BULLER.—It will be to no purpose. The patent claims the exclusive liberty of making lace composed of silk and cotton thread mixed; not of any particular mode of mixing it, and therefore, as it has been clearly proved and admitted, that silk and cotton thread were before mixed on the same frame for lace in some mode or other, the patent is clearly void, and the jury must find for the crown.

Verdict for the crown.

IN THE COURT OF KING'S BENCH.

Turner against Winter.

S. C. 1. Z. Rep. 402.

5 Feb. 1787.

THIS was an action on the case brought against the defendant, for infringing the plaintiff's patent,

which was granted to him for producing a yellow colour, for painting in oil or water, and making white lead, and separating the mineral alkali from common salt; all by one process. On the trial before Mr. Justice Buller, at the sittings at Westminster, a verdict was found for the plaintiff; and on a motion to set aside that verdict, and grant a new trial, these facts are reported. The plaintiff, within the usual time, had enrolled the following specification:

“ Take any quantity of lead, and calcine it, or minium, or red lead, litharge, lead ash, or any calx, or *preparation of lead fit for the purpose*: to any given quantity of the above-mentioned materials add half the weight of sea salt, with a sufficient quantity of water to dissolve it, or rock salt, or sal gem, or fossil salt, or any marine salt, or *salt-water proper for the purpose*: mix them together by trituration, till the lead becomes impalpable, or sufficiently comminuted. When the materials have been ground, let them stand for twenty-four hours, in which time the lead will be changed to a good white, and the salt decomposed; if not, the trituration must be repeated with the further addition of salt, till the white colour be obtained. The decomposition of the salt may also be brought about by digestion or by calcination. The materials may be suffered to remain together before the alkali is separated by the addition of water, for a longer time than is specified above, according to the discretion of the operator, and the end he wishes to obtain. The yellow colour is produced by calcining the lead

after the alkali has been separated from it till it shall acquire the colour wanted: this will be of different tints, according to the continuance of the calcination, or the degree of heat employed. The white lead must be finished by frequent ablutions, and by bleaching it till the white be made perfect."

On the part of the plaintiff it was proved, that the first effect of the process was the separating of the mineral alkali from common salt; that that produced white lead; and that by continuing the process to a certain degree, and afterwards exposing the matter, the yellow colour was produced. That, as the specification required the heat to be continued till the colour was obtained, any person, trying the experiment, would necessarily be led to fusion. That a chemist would see by the specification, that, if less heat would not answer the purpose, he must go on to fusion. The difference between fusion and calcination, both of which proceed from different degrees of heat operating upon the subject matter, was, that the substance to be calcined continued in a solid form; whereas fusion is a liquid state to which the substance may be reduced by continuing the heat. Instances were produced by persons who had made the colour by the help of the specification, after trying some experiments. In trying those experiments, minium had been fused in the first instance. The white lead produced by following the directions in the specification was not what was sold as such, but a white substance, the basis of which was lead.

For the defendant it was proved, that the patent colour could not be made by following the directions of the specification ; for calcination was not sufficient to produce the effect intended : it was necessary to go on to fusion. That, as it appeared upon the specification, minium, or red lead, might be considered most convenient for the purpose, because a previous process was necessary to reduce lead to minium, or litharge, before the other parts of the process were to be begun ; minium and litharge differing only in having undergone different degrees of calcination. But that minium would not produce the effect, unless first fused. And that if red lead were calcined, the experiment would not succeed without fusion ; whereas, according to the terms of the specification, fusion should be cautiously avoided. That the specification was calculated to mislead, also, with respect to the salts. For fossil salt is a generic term, including all mineral salts : but only one species of fossil salt, namely, sal gem, has marine acid, without which the colour could not be produced. That several persons had tried to make white lead by the specification, but had not succeeded. They could only produce a greyish white powder, quite unfit for painting, and not merchantable.

Mr. Justice BULLER, after reporting these facts, observed, that at the trial three objections had been taken to the specification ; 1st, That, after directing that lead should be calcined, it directed another ingredient to be taken, which would not answer the purpose, namely, minium. Neither was it said that the minium should be calcined or

fused : but if it had any reference to the preceding words, then it should be calcined, which would not produce the effect, fusion being necessary. 2dly, That “*fossil salt*” was improperly mentioned. There were many kinds of fossil salt, only one of which, namely, “*sal gem,*” would answer the purpose ; because it must be a *marine salt*. 3dly, That all these things put together did not produce the thing intended. And that the patent was for an invention to do three things in one process, whereas one of them, namely, white lead, could not be produced at all ; for that a white substance like lead remained applicable only to some of the purposes of common white lead. The learned judge then said, that at the trial he had told the jury, that if either of these objections were well founded, it would avoid the patent.

Messrs. Erskine and Piggott shewed cause against the rule for granting a new trial, and contended, that, in actions for infringing patents, it is not necessary for the plaintiff to give any evidence to shew what the invention is, but that it is incumbent on the defendant, if he objects to the specification, to shew that it is defective, and that persons acquainted with the subject could not, by the assistance of the specification, effect the thing intended. The consideration which the patentee gives for his monopoly, is the benefit which the public are to derive from his invention, after his patent is expired : and that benefit is secured to them, by means of a specification of the invention. But it is not necessary that that specification should be such, as that persons unacquainted with

the terms of art, which must necessarily be used in writing it, should be able to understand it. It is sufficient, if persons of skill can understand the process, by means of the specification, so as to keep alive the discovery, after the patentee's exclusive title is expired.

The first objection which has been raised against the sufficiency of this specification has no weight; for, though the direction to calcine is applicable to all the ingredients in the first part of the description, yet scientific persons would instantly discover what degree of heat was necessary to be used to each of those ingredients; and that minium, being already a calx, must be fused. 2dly, The heat is ordered to be continued till the experiment succeeds, and the colour is produced. Fusion is a necessary consequence of continuing the heat; and this direction would be sufficiently understood by all persons acquainted with the subject.

As to the second objection, with respect to the "fossil salt." The specification begins with "sea salt," which is the genus; then it states, not "any fossil salt," but "fossil salt," or "any marine salt:" the marine salt is, therefore, the basis of the experiment. So that no fossil salt, but what is likewise a marine salt, can be taken under this description.

The answer to the third objection is, that a species of white lead is produced, though not the common ceruse; and the patent does not profess to make the common white lead. Besides, the making of white lead was not the subject of the

present action, which was for making the yellow colour; this accounts for the plaintiff's not being prepared to prove this part of the specification. Upon the whole, this was a mere matter of evidence, as to the sufficiency of the specification, upon which the jury have exercised a sound discretion.

Mr. Bearcroft, in support of the rule, was stopped by the court.

Mr. Justice ASHHURST.—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 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 any thing which tends to mislead the public; in that case the patent is void. Here it does appear to me, that there is at least such a doubt on the evidence, that I cannot say this matter has been so fully and fairly examined as to preclude any farther investigation of the subject. Three objections have been made to this specification: the first is, that in the specification the public are directed “to take any quantity of lead, and calcine it, or minium, or red lead, from whence it is inferred, that *calcining* is only to be applied to *lead*; I confess if the ob-

jection had rested here, I should have entertained some doubt.

The next objection is, that in the subsequent materials to be added, the public are directed to add "half the weight of sea salt, or sal gem, or fossil salt, or any marine salt." Now "fossil salt" is a generic term, including "sal gem" as well as other species of fossil salt. And I understand that sal gem is the only one which can be applied to this purpose; so that throwing in *fossil salt* can only be calculated to raise doubts and mislead the public. Those words 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.

Another objection was taken as to the white lead; to which it was answered, that the invention did not profess to make common white lead. But that is no answer; for if the patentee had intended to produce something only like white lead, or answering some of the purposes of common white lead, it should have been so expressed in the specification. But in truth the patent is for making white lead and two other things by one process. Therefore, if the process, as directed by the specification, does not produce that which the patent professes to do, the patent is void. It is certainly of consequence that the terms of the 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.

Mr. Justice BULLER.—Many cases upon patents have arisen within our memory, most of which have been decided against the patentees, upon the ground of their not having made a full and fair discovery of their inventions. Whenever it appears that the patentee has made a fair disclosure, I have always had a strong bias in his favour; because in that case he is entitled to the protection which the law gives him. How far that law, which authorises the king to grant patents, is politic, it is not for us to determine. When attempts are made to evade a fair patent, I am strongly inclined in favour of the patentee: but where the discovery is not fully made, the Court ought to look with a very watchful eye, to prevent any imposition on the public. Then the question is, whether the plaintiff has made a fair discovery? I do not agree with the counsel who have argued against the rule, in saying that it was not necessary for the plaintiff to give any evidence to shew what the invention was, and that the proof that the specification was improper lay on the defendant; for I hold that a plaintiff must give some evidence to shew what his invention was, unless the other side admit that it has been tried and succeeds. But wherever the patentee brings an action on his patent, if the novelty or effect of the invention be disputed, he must shew in what his invention consists, and that he produced the effect proposed by the patent in the manner specified. Slight evidence of this on his part is sufficient; and it is then incumbent on the defendant to falsify the specification. Now in this case

no evidence was offered by the plaintiff, to shew that he had ever made use of the several different ingredients mentioned in the specification ; as for instance minium, which he had nevertheless inserted in the patent ; nor did he give any evidence to shew *how* the yellow colour was produced. If he could only make it with two or three of the ingredients specified, and he has inserted others which will not answer the purpose, that will avoid the patent. So if he makes the article for which the patent is granted, with cheaper materials than those which he has enumerated, although the latter will answer the purpose equally well, the patent is void, because he does not put the public in possession of his invention, or enable them to derive the same benefit which he himself does.

As to the first objection which has been taken with respect to the minium : it was not pretended by any of the plaintiff's witnesses that he ever made use of minium. And it was proved by the defendant's witnesses, that from the specification they should be led to use minium, because minium is lead already calcined, which is what the specification directs in the first instance. But minium will not answer the purpose. Then as to fusion : it is said that the public are directed by the words of the specification to continue the heat till the effect is produced ; which must necessarily lead to fusion, though fusion is not expressly mentioned. But that is no answer to the objection ; for the specification should have shewn by what degree of heat the effect was to be produced. Now it does not mention the fusion ; and, as one of the

witnesses said, in order to produce the effect, "you must go out of the patent," for fusion is beyond calcination, and in some sense contrary to it; and by mentioning calcination, it should seem that fusion was to be avoided.

The next objection was as to the salts. "Fossil salt" is mentioned as a distinct species of salt, and many other salts are also mentioned as indifferent whether one or the other be used. But it was proved that fossil salt was a generic term, including several species, and that "sal gem" was the only species of it which would answer the purpose, because none of the others contained a marine acid, which was essential.

There was no contradiction by the witnesses on the third objection; for the most that the plaintiff's witnesses said was, that following the specification, the experiment only produced a white substance like lead.

Now, on either of these grounds, the patent is void. Because if the patentee says, that by one process he can produce three things, and he fails in any one; the consideration of his merit, and for which the patent was granted, fails, and the crown has been deceived in the grant. Slight defects in the specification will be sufficient to vacate the patent. In a case before Lord Mansfield for infringing a patent for steel trusses, it appeared that the patentee in tempering the steel rubbed it with tallow, which was of some use in the operation; and because this was omitted, the specification was held to be insufficient, and the patent was avoided.

Rule absolute.

IN THE COURT OF KING'S BENCH.

*Hayne and another, against Maltby.**S. C. 3 T. R. 435*

17 Nov. 1789.

THIS was an action of covenant on articles of agreement, which recited that the plaintiffs were assignees of T. Taylor, of a patent for an engine or machine to be fixed to a common stocking frame, for making a sort of net or open work, called point net; and that the defendant had applied to the plaintiffs for their permission to use a stocking frame to one of their patent machines, to which they had consented, on condition of his working it in the manner described in the specification; and then stated a covenant by the plaintiffs with the defendant, that he should, during the remainder of the term of the letters patent, freely use and employ one stocking frame, with their patent engine or machine thereto, in case the same should be worked only in the manner described by the specification, without any interruption by them; and also a covenant by the defendant, that he would not, during the residue of the term of the letters patent, use or employ any of the patent engines, or any engines resembling the same, except the stocking frame and machine in the articles allowed to be employed by him. The declaration then averred enjoyment by the defendant without any interruption from the

plaintiffs; and then assigned two breaches; one for using and employing patent engines or machines, other than and besides that by the agreement allowed to be employed by him; the other for using engines or machines resembling the patent machines.

To this there were several pleas; the three last of which only are material here. The third plea set forth the letters patent, which stated a petition by the patentee, calling himself the inventor of the machine, and contained the usual proviso, that they should be void, if the patentee did not enrol a specification of his invention in Chancery in four months; and then averred, that the patentee did not enrol such specification.

The defendant, in his fourth plea, said, that the invention mentioned in the patent was not a new invention; and in the fifth, that the invention was not discovered by Taylor, the patentee.

The plaintiffs demurred to the 3d, 4th, and 5th pleas; because the defendant attempted to put in issue matters foreign to the merits of the cause, inasmuch as he was estopped by his deed from putting those matters in issue here.

Mr. Wigley, in support of the demurrer, contended, that the defendant was estopped by his deed to say that this was not a new invention, or that it was not discovered by the patentee. Wherever a party has entered into a specialty, he cannot afterwards be permitted to say that he received no consideration for it, though he may plead that the consideration was illegal. In *Oldham v. Langmead*, tried before Lord Kenyon, at

the sittings after Trinity Term, 1789, where the action was brought by the assignee of the patentee against the patentee, his Lordship would not permit the latter to shew that it was not a new invention against his own deed. If, in point of fact, this were not a new invention, the defendant should have repealed the letters patent by *scire facias*, and then applied to the Court of Chancery to have had the deed delivered up to be cancelled. But by his deed he has admitted that the plaintiffs had a title; and, as long as the term mentioned in it exists, he is estopped from denying it; in the same manner that a tenant, who holds under a demise from his landlord is, in answer to an action for rent.

Mr. Chambre, on the other side, argued that the defendant is not estopped by his deed to shew that he has entered into this covenant, not only on an illegal consideration, but also without any consideration. A person cannot indeed aver against a record, though he may against the operation of it. Here then, as the deed recites that the plaintiffs were in possession of a patent, the defendant is perhaps estopped to deny it; but it cannot estop him from denying the operation of it. In this indenture, the plaintiffs do not assign the patent to the defendant; they only covenant that the defendant may use the engine in a certain manner, which he might have done without the covenant. For on this record it must be taken that the invention was not new; and then this is a covenant without consideration, or entered into for an illegal consideration; because it operates

in restraint of trade. In *Mitchell v. Reynolds*, 1. P. Williams, 181. it was held that a covenant in restraint of trade in a particular place, if without consideration, or in restraint of trade generally was void. And this also answers the argument of estoppel; for no deed of this sort can operate by way of estoppel, as it is against public policy. Neither could it be necessary for the defendant to sue out a *scire facias* to repeal the patent, because he disputed its validity; because in all actions brought by a patentee for infringing the patent, it is incumbent on him to make out his right.

Mr. Wigley, in reply, contended that this is not a void consideration: but, if it were, it will not avoid a deed in a court of law. With respect to this being in restraint of trade; though a covenant not to set up a trade generally be bad, yet the party may covenant not to set up a trade in a particular place; and the covenant in this instance is similar to the latter; for it is a covenant not to use a particular machine. Even admitting this patent to be void, this is not so hard a case as that of a tenant who may be compelled to pay rent to a person having a title paramount his landlord's, and who is nevertheless estopped to impeach his landlord's title in an action for the same rent.

Lord Chief Justice KENYON.—The facts of this case are shortly these: the plaintiffs, pretending to derive a right under a patent, assigned to the defendant part of that right, on certain terms; and, notwithstanding the facts now disclosed shew that they have no such privilege, they still insist

that the defendant shall be bound by his covenant, though the consideration of it is fraudulent and void. This is not to be considered as a covenant to pay a certain sum in gross, at all events; but to use a machine in a particular way, in consideration of the plaintiffs having conferred that interest on the defendant, which they professed to confer by the agreement. Now in point of conscience, it is impossible that two persons can entertain different ideas upon the subject. But it is said, that though conscience fails, the defendant is estopped in point of law from saying that the plaintiffs had no privilege to confer. But the doctrine of estoppel is not applicable here. Where indeed an heir apparent, having only the hope of succession, conveys, during the life of his ancestor, an estate, which afterwards descends upon him: although nothing passes at that time, yet when the inheritance descends upon him, he is estopped to say that he had no interest at the time of the grant. There an estoppel is founded on law, conscience, and justice; but what is the case here? Who is estopped? The person supposed to be estopped is the very person who has been cheated and imposed upon. In the case *Oldham v. Langmead*, the patentee had conveyed his interest in the patent to the plaintiff; and yet, in violation of his contract, he afterwards infringed the plaintiff's right, and then attempted to deny his having had any title to convey. But I was of opinion that he was estopped by his own deed from making that defence. But there is no similarity between that and the present case.

Neither does this resemble the case of landlord and tenant; for the tenant is not at all events estopped to deny the landlord's title: the estoppel only exists during the continuance of his occupation; and if he be ousted by a title paramount, he may plead it.

Mr. Justice ASHURST.—This is a good plea; and the defendant is not estopped from disclosing any of the matters contained in it. This is not like the case of landlord and tenant: as long as the tenant enjoys the estate, he shall not be permitted to deny his landlord's title; for he has a meritorious consideration; but when he is expelled by a person having a superior title, he may plead it. But this is a case of a very different kind. The plaintiffs use this patent as a fraud on all mankind; and they state it to be an invention of the patentee, when in truth it was no invention of his. The only right conferred on the defendant by this agreement, was that of using this machine, which was no more than that which he, in common with every other subject, has without any grant from the plaintiffs.

Mr. Justice BULLER.—In the construction of all covenants and agreements, the court has universally considered the intention of the parties. Now here the plaintiffs asserted that they had an exclusive right to a particular machine; and if they had, they might convey it to any other person. They then came to an agreement with the defendant, by which they covenanted, that he should be at liberty to use the patent machine, of which they were then in possession, provided he

would use it in the manner therein specified ; in consideration of which, he covenanted not to use any other machine. But it is now discovered that they had no such right, and therefore the defendant has not the consideration for which he entered into this covenant ; and notwithstanding which, they insist that he is still bound. I think that the case of landlord and tenant is not unlike this ; for the facts in this case, disclosed by the pleas, are equivalent to an eviction of the tenant. As long as the tenant holds under the lease, he is estopped from denying his landlord's title ; but when he is evicted, he has a right to shew that he does not enjoy that which was the consideration for his covenant to pay the rent, notwithstanding he has bound himself by the covenant.

Mr. Justice GROSE declared himself of the same opinion.

Judgment for the defendant.

IN THE COURT OF COMMON PLEAS.

Boulton and Watt v. Bull.
S. C. 2 Ke. Bl. 462. 18 T. R. 45.
 16th May, 1795.

THIS was an action on the case for infringing a patent.

The first count of the declaration stated, that the king by letters patent, under the great seal, dated 5th January, 9 Geo. III. granted to the pe-

tioner, James Watt, the sole benefit and advantage of making, exercising, and vending a certain invention of him the said James Watt; being a method by him invented, of lessening the consumption of steam and fuel in fire engines, for the term of fourteen years, with a *proviso* for a specification, &c. in the usual manner. It then stated, that by an act of parliament, passed 15 Geo. III. the benefit of the patent was extended to twenty-five years, to the said James Watt and his assigns: that on 5th September, 1777, he assigned two thirds of the patent right to Boulton the other plaintiff, for the remainder of the term of twenty-five years, and that the defendant, against the consent of the plaintiffs, made, constructed, and sold divers engines, in imitation of the said engine so invented and found out by the said James Watt, and of the like nature and kind, in breach of the said act of parliament, and against the privilege granted to the said James Watt as aforesaid. The second count was for making and constructing (omitting selling) engines, &c. similar to the first count. The third count was for making, constructing, and selling engines, &c. partly in imitation as before. The fourth, for making and constructing engines partly in imitation, &c. The fifth, for using and putting in practice the invention of the said plaintiff James Watt. The sixth, for using and putting in practice part of the said invention. The seventh, for counterfeiting. The eighth, for imitating. The ninth, for resembling. The tenth, for counterfeiting in part. The eleventh, for imitating in part; and

the twelfth, for resembling in part the said invention.

The general issue was pleaded; and the cause came on to be tried before the Chief Justice at the sittings after Trinity term, 1793, when a case was reserved for the opinion of the court, which stated, that his majesty, by letters patent, dated the fifth January, in the ninth year of his reign, granted to the plaintiff James Watt, his special licence, full power, sole privilege, and authority that he the said James Watt, his executors, administrators, and assigns, should, and lawfully might, during the term of fourteen years therein mentioned, use, exercise, and vend, throughout England, Wales, and Berwick upon Tweed, and the colonies and plantations abroad, his the said James Watt's new invented method of lessening the consumption of steam and fuel in fire engines, with the usual proviso for inrolling a specification. That the said James Watt did, in pursuance of such proviso, cause a specification or description of the nature of the said invention to be inrolled in the Court of Chancery, which description was particularly set forth in the said act of parliament, and was as follows: "My method of lessening the consumption of steam, and consequently fuel in fire engines, consists of the following principles: first, that vessel in which the powers of steam are to be employed to work the engine, which is called the cylinder in common fire engines, and which I call the steam vessel, must, during the whole time the engine is at work, be kept as hot as the steam that enters it; first, by inclosing it in a case of wood, or any

other materials that transmit heat slowly; secondly, by surrounding it with steam or other heated bodies; and thirdly, by suffering neither water nor any other substance colder than the steam to enter or touch it during that time. Secondly, in engines that are to be worked wholly or partially by condensation of steam, the steam is to be condensed in vessels distinct from the steam vessels or cylinders, although occasionally communicating with them. These vessels I call condensers, and whilst the engines are working, these cylinders ought at least to be kept as cool as the air in the neighbourhood of the engines, by application of water or other cold bodies. Thirdly, whatever air or other elastic vapour is not condensed by the cold of the condenser, and may impede the working of the engine, is to be drawn out of the steam vessels or condensers, by means of pumps wrought by the engines themselves or otherwise. Fourthly, I intend, in many cases, to employ the expansive force of steam to press on the pistons, or whatever may be used instead of them, in the same manner as the pressure of the atmosphere is now employed in common fire engines. In cases where cold water cannot be had in plenty, the engines may be wrought by this force of steam only, by discharging the steam into the open air, after it has done its office. Fifthly, where motions round an axis are required, I make the steam vessels in form of hollow rings or circular channels, with proper inlets and outlets for the steam, mounted on horizontal axles, like the wheels of a water-mill: within

them are placed a number of valves, that suffer any body to go round the channel, in one direction only. In these steam vessels are placed weights so fitted to them as entirely to fill up a part or portion of their channels, yet rendered capable of moving freely in them, by the means herein after mentioned or specified. When the steam is admitted in these engines, between these weights and the valves, it acts equally on both, so as to raise the weight to one side of the wheel, and by the re-action on the valves, successively to give a circular motion to the wheel: the valves opening in the direction in which the weights are pressed, but not on the contrary. As the steam vessel moves round, it is supplied with steam from the boiler, and that which has performed its office may either be discharged by means of condensers, or into the open air. Sixthly, I intend, in some cases, to apply a degree of cold not capable of reducing the steam to water, but of contracting it considerably, so that the engines shall be worked by the alternate expansion and contraction of the steam. Lastly, instead of using water to render the piston or other parts of the engines air and steam tight, I employ oils, wax, resinous bodies, fat of animals, quicksilver, and other metals in their fluid state."

And the said James Watt, by a memorandum added to the said specification, declared that he did not intend that any thing in the fourth article should be understood to extend to any engine, where the water to be raised enters the steam vessel itself, or any other vessel having an open

communication with it. In the fire engines referred to in the said specification, and which were in use prior to the patent in question, motion was given to the piston by the pressure of the atmosphere, acting upon one side of it, while a vacuum or certain degree of exhaustion was produced on the other side, within the steam vessel denominated the cylinder, by means of the injection of cold water, whereby the steam was condensed; which operation, prior to the invention of the said James Watt, was always performed in the steam vessel or cylinder itself, when the steam had been condensed, and the piston had descended, such portions of air and water as remained under it, within the steam vessel or cylinder, were expelled through valves, by the next succeeding steam from the boiler, and that steam counterbalancing the pressure of the atmosphere at the open end of the cylinder, allowed the piston to rise up with that end of the lever to which it was attached, while the other end of the lever, and the matters attached thereto, descended by reason of their greater comparative weight, and thus the engine was restored to that state in which it was previous to the first condensation. The steam was, for this purpose, as occasion required, admitted through a pipe from a distinct vessel called the boiler, where it was generated, which occasionally communicated with the cylinder, by means of a valve, which was opened and shut by the action of the engine. The injection of cold water was in like manner admitted, as occasion required, into the cylinder, through a pipe from

another distinct vessel containing cold water, called the injection cistern, by means of a cock or valve which was also opened and shut by the action of the engine, and such pumps as were used in these engines were also wrought by the engines themselves. The construction and use of pumps for drawing out air, elastic vapour, or water from places or vessels where a vacuum or exhaustion was required, were known and practised before the obtaining the letters patent above mentioned, but had not been applied to the cylinders or condensers of steam engines. The said invention of the said James Watt was, at the time of making the said letters patent, a new and useful invention; and the said privilege, vested by the said act of parliament, in the said James Watt and his assigns, was infringed by the defendant, in the manner charged upon him by the declaration. The said specification made by the said James Watt is of itself sufficient to enable a mechanic acquainted with the fire engines previously in use, to construct fire engines producing the effect of lessening the consumption of fire and steam in fire engines, upon the principle invented by the said James Watt.

The questions for the opinion of the court were;

First, whether the said patent was good in law, and continued by the act of parliament above mentioned.

Second, whether the above specification of the plaintiff James Watt was, in point of law, sufficient to support the above patent.

This case was twice argued; the first time by

Serjeant Watson for the plaintiffs, and Serjeant Le Blanc for the defendant; and the second by Serjeant Adair for the plaintiffs, and Serjeant Williams for the defendant.

The substance of the arguments on the part of the plaintiffs was, that they have a right to recover damages for the infringement of their patent, which is good in law, and continued by the act of parliament, and also duly supported by the specification. It is good in law, being for a newly discovered method of producing an important effect in the use of the old steam engine, and comes within the provision of the stat. 21 Jac. I. c. 3. s. 6. By every fair rule of construction, the words working or making any manner of new manufactures, must include the invention of the plaintiffs. The term manufacture means any thing made or produced by art, and the method or invention for which the patent is granted is to produce an effect by artificial means, by which the consumption of fuel shall be lessened in steam engines. Whether the word method be used as in the patent, or engine as in the act for continuing it, the meaning is the same, and the court will not deprive the plaintiffs, the merit and utility of whose invention is admitted on all sides, of the benefit of that invention by mere verbal criticism.

J. HEATH.—“When a mode of doing a thing is referred to something permanent, it is properly termed an engine; when to something fugitive, a method.”

This patent is not expressed in terms new or

unusual; almost all the patents upon record, that have been granted to those who have made discoveries or improvements in the mechanic arts, being for the method of doing the thing, and not for the thing done.

J. HEATH.—“Is there any instance of a patent for a mere method?”

The patent granted to Dollond, for his improvement in making the object glasses of telescopes, was for “an invention of a new method of making the object glasses of refracting telescopes.” So also Hartley’s patent was for his method of securing buildings from fire. So likewise are the numerous patents that have been granted for the different improvements which have been made of late years in chemistry and medicine; (many patents of this kind were cited). The patent therefore of the plaintiffs is good in law, and is continued by the act 15 Geo. III. That act expressly recites the patent, and extends the benefit of it for twenty-five years, to Watt and his assigns. It was therefore clearly the intention of the legislature that the patent already granted should be continued, and the court will construe the act in such a manner as to effectuate that intention.

With regard to the specification, that is sufficiently explicit to support the validity of the patent. The improvement made by Watt consists in a discovery, that by letting out the steam from the cylinder into another vessel, in order to condense it, instead of admitting cold water into the cylinder for that purpose, as was done in Newcomen’s

engine, and by keeping the cylinder hot, the consumption of steam and consequently of fuel would be diminished. The communication between the cylinder and the other vessel is formed by means of valves, which were before in use in Newcomen's engine, and therefore not necessary to be more accurately described, and the mode of keeping the cylinder hot is explicitly stated in the specification. There is no new mechanical construction invented by Watt, capable of being the subject of a distinct specification; but his discovery was of a principle, the method of applying which is clearly set forth, and therefore a drawing would have been unnecessary. So in Dollond's patent; the specification describes the principle, but not the mechanical construction by which it is carried into effect. It recites that a patent had been granted to him, for "the invention of a new method of making the object glasses of refracting telescopes, by compounding mediums of different refractive qualities, whereby the errors arising from the different refrangibility of light, as well as those which are produced by the spherical surfaces of the glasses, were perfectly corrected." It then goes on to state, after mentioning the defects of the telescopes then in use, that in the new telescopes the images of objects were formed by the difference between two contrary refractions: the object glass being a compound of two or more glasses put close together, whereof one was concave and the other convex: that the excess of refraction by which the image was formed was in the convex glass, which was made of a medium or

substance, in which the difference of refrangibility was not so great as in the substance of which the concave glass was formed; therefore, their refractions being proportioned to their difference of refrangibility, there remained a difference of refraction by which the image was formed, without any difference of refrangibility to disturb the vision; and that the radii of the surfaces of each of those glasses were likewise so proportioned, as to make the aberrations which proceeded from their spherical surfaces respectively equal, which being also contrary, destroyed each other. But there is no mention of any mechanism, nor does the specification state the degrees of sphericity or curvature of the concave or convex glasses; because it is well known that the curvature of the one must be proportioned to that of the other, in order to correct the refrangibility of the rays of light. It is also to be observed, that the jury have found that the specification is sufficient to enable a mechanic acquainted with the fire engines previously in use to construct fire engines producing the effect of lessening the consumption of fuel and steam, upon the principle invented by the plaintiff Watt. It is therefore upon the whole submitted to the court, that both the questions stated in the case must be answered in the affirmative.

Justice BULLER.—“The objection to Dollond’s patent was, that he was not the inventor of the new method of making object glasses, but that Dr. Hall had made the same discovery before him. But it was holden, that as Dr. Hall had

confined it to his closet, and the public were not acquainted with it, Dollond was to be considered as the inventor."

The arguments on the part of the defendant were the following :

This question may be argued on three grounds. 1st, On the patent. 2d, Upon the act of 15 Geo. 3. 3d, Upon the act and patent taken together.

In considering the case upon the patent itself, the patent appears to be void, because it differs from the specification; the patent being for a formed instrument or machine, but the specification for principles unorganized. It is for a new invented method. Now the word invention, when applied to mechanical subjects, properly signifies something which has been already formed, some manufacture or machine, and is not applicable to mere unorganized principles. The plaintiff Watt cannot be said to have invented the principles; for those principles were in use in Newcomen's steam engine. It is true that the application of those principles in the manner described in the specification is new; but it was well known long before, that steam had an expansive power, and was condensed by cold. It is in this sense that the word invention is used in the patent. It recites that Watt had represented to the king, "that he had, after much labor and expense, invented a method of lessening the consumption of steam and fuel in fire engines." From these words it seems clear that he meant it to be understood by the crown, that the invention which he represented himself to have made was completely formed,

and not that he had merely conceived in his mind the application of certain known principles, by which the consumption of steam and fuel would be lessened in fire engines: for the ideas of the principles before they were organized could not have been attended with great labor, and much less with great expense. That the representation was understood in this sense by the crown, will appear from considering other parts of the patent. The king grants to Watt, that he shall "make, use, exercise, and vend his said invention."

In another part of the patent, all persons are forbidden to counterfeit, imitate or resemble the said invention, and to make or cause to be made any addition thereto, or subtraction therefrom. In another part, it is provided that the patent shall not extend to give privilege to Watt, to use or exercise any invention or work whatsoever which had theretofore been found out or invented by any other, and publicly used or exercised; but that every other person should use and practise their several inventions. Now it is impossible that any of the expressions thus cited from the patent can be applied to the invention of mere unorganized principles of science. If then the patent be, which it clearly is, for a formed instrument or machine, it is void; because it is admitted that there is no specification descriptive of any formed instrument whatever, nor is there any drawing or model.

But supposing it to be a patent for mere principles, (for the specification states that the invention consists of principles,) it is neither ori-

ginally good in law, nor continued by the act of 15 Geo. 3. It is not good in law, because it does not fall within the construction of the stat. 21 Jac. 1. cap. 3, upon which alone it must, if at all, be supported. The 6th section of that act provides, that nothing therein contained shall extend to any letters patent, or grants of privilege for fourteen years or under, thereafter to be made, of the sole working or making of any manner of new manufactures, which others at the time shall not use. The word manufacture is descriptive either of the practice of making a thing by art, or of the thing when made. The invention, therefore, of any instrument, used in the process of making a thing by art, is a manufacture, and the subject of a patent within the statute, because such an instrument is itself a thing made by art. So, also, medicines may be said to be a species of manufacture, and within the provision of the statute, because they consist in the practice of mixing together and making up by art the different ingredients of which they are composed, and are the result of principles organized, as far as the nature of the thing will admit. The same observation may be made with respect to Dollond's telescopes, which are certainly a manufacture, and within the stat. 21 Jac. 1: but they consist of principles reduced into form and practice, as much as the subject will admit, and the patent is for glasses completely formed, not for mere principles; and the specification describes the manner in which the invention is to be carried into execution, with all the perspicuity of which the thing

is capable. That this is the true meaning of the term manufacture, as it is used by the legislature, likewise appears from the words "making or working" being applied to it, and "which others at the time shall not use," and also from the provision that the patentee shall ascertain the nature of his invention, and in what manner the same is to be performed. The specification is the price which the patentee is to pay for the monopoly. In the construction of specifications, it is a rule that the patentee must describe his invention in such a manner, that other artists in the same trade or business may be taught to do the same thing for which the patent is granted, by following the directions of the specification alone, without any new invention or addition of their own, and without the expense of trying experiments. (*Turner v. Winter*, p. 152.) This necessarily excludes any supposition, that mere principles can be the subject of a patent. That this is the true construction of the word manufactures in the statute appears also from Lord Coke's commentary on it, 3 Inst. 184; who, as appears from the journal of the House of Commons, was chairman of the committee to whom the bill was referred, and who, therefore, probably either drew or perused it. This construction of the word manufactures in the statute is also fortified by the opinion of Mr. Justice Yates, in the controversy respecting literary property, 4 Bur. 2361. *Miller v. Taylor*, who there held in illustration of the subject before him, that mere principles, not embodied, and reduced into practice, were not the subject of a

patent. Until they are so embodied, they are like the sentiments of an author while in his own mind. In that state, they are alike the property of him or of another. But, when once they are published, then, and not before, his exclusive property in them, or in the organization of them, commences. In Sir Richard Arkwright's case too, the learned judge before whom it was tried, (Mr. J. Buller) stated in his summing up, that, for a principle alone, a patent could not be obtained. And, independent of authorities, the reason of the thing shews that such a patent could not be obtained within the meaning of the statute. By obtaining a patent for principles only, instead of one for the result of the application of them, the public is prevented, during the term, from improving on those principles; and, at the end of the term, is left in a state of ignorance as to the best, cheapest, and most beneficial manner of applying them to the end proposed.

It is true, indeed, that the jury have found, that the specification made by Watt is of itself sufficient to enable a mechanic acquainted with fire-engines previously in use to construct fire-engines, producing the effect of lessening the consumption of fuel and steam in fire-engines, upon the principle invented by Watt. But it is not found that the specification would enable a mechanic to construct Watt's fire-engines; nor is it found to what extent the consumption of steam and fuel would be lessened in fire-engines, constructed upon the principles stated in the specification: nor whether those engines would have the effect of lessen-

ing the consumption of steam to the same degree with Watt's engines. All this is left uncertain. The merit of the invention must be measured by the quantity of fuel which may be saved by it. Now, it is possible, that agreeable to this finding, a fire-engine might be made, which would produce the effect of lessening the consumption of fuel and steam, upon the principles mentioned in the specification ; but yet such engine might save only one bushel of coals, or other fuel, where Watt's engine would save one hundred. The finding of the jury, therefore, does not mend the case. The specification ought to have described the method by which the machine might be made to save the greatest quantity of fuel which it was known to be capable of saving, and which it in fact does save, when used by the inventor. It is a settled rule of law, that if a patentee makes the thing for which the patent is granted with cheaper materials, or if he applies and uses it in a more advantageous and useful manner than is described in the specification, the patent is void ; because he does not put the public in possession of his invention, or enable them to derive the same benefit that he himself derives from it. (Turner v. Winter, p. 154.).

It is to be shewn, in the next place, that the patent is not continued by the act 15 Geo. 3. c. 61. The title of it is, " An act for vesting in James Watt the sole property of certain steam-engines, called fire-engines, of his invention." It recites that the king, by his letters patent, had given and granted to Watt the sole benefit and

advantage of making and vending certain engines, by him invented, for lessening the consumption of steam and fuel in fire-engines, with a proviso, that he should cause a particular description of the nature of the said invention to be inrolled, and that he accordingly had caused a particular description of the nature of the said engine to be enrolled. It further recites, that the said James Watt had employed many years, and a considerable part of his fortune, in making experiments upon steam-engines, commonly called fire-engines; but, on account of the many difficulties which always arise in the execution of such large and complex machines, he could not complete his intention before the end of the year 1794, when he finished some large engines as specimens of his construction; and that his engines might be of great utility, and then enacts, that the sole privilege of making, constructing, and selling the engines therein before particularly described, shall be vested in Watt for twenty-five years, and that he, during the said term, shall make, exercise, and vend the said engines. Now, is it possible to say that this act continues a patent for mere principles? Certainly not. If, therefore, the patent be really for principles, it is not continued by the act: but supposing, that though the act does not describe the patent according to the terms of it, yet it does describe it according to its import, namely, as a patent for principles; in that case it would not be within the protection of the stat. of 21 Jac. 1, for the reasons already offered.

There is a proviso in the act 15 Geo. 3, that

every objection in law, competent against the said patent, should be competent against the act, to all intents and purposes, except so far as relates to the term thereby granted. Though this, therefore, is a grant of a monopoly by the legislature, yet it is to receive precisely the same construction as if it had been a grant by letters patent. Now, the grant itself is void, being founded on a false suggestion of the party to whom it is made; for, it is a rule of law, that if the king's grant be founded on a false suggestion of the party to whom it is made, it is void; as if any thing mentioned in the consideration of the grant be false. The consideration, which is the foundation of this grant in the act, is the recital, that the king had, in January, 1765, by his letters patent, granted to Watt, for the term of fourteen years, the sole benefit and advantage of making and vending certain engines by him invented for lessening the consumption of steam and fuel, and that, owing to the reasons which are mentioned in the recital, it was probable that the whole term granted by the patent would elapse, before he could receive any compensation adequate to his labor; for which reasons, the term granted by the patent is prolonged, and the act vests in him the sole privilege of making, constructing, and selling the said engines, for twenty-five years; that is, the engines, the sole making and vending of which the king had granted by his said letters patent. But it is admitted, that the king did not grant by the patent a monopoly for making and vending any engines whatever. The recital, therefore, which

is the very foundation of the grant, is untrue. It has been also adjudged, that if a private act of parliament, like the present, be founded upon a false recital, the act is void. Plowd. 390. Earl of Leicester v. Heydon, where it is laid down, that statutes which misrecite things to which they refer, are void: and that, in the principal case, the statute which recited that A. was attainted, when, in fact, he was not attainted, was void. Another objection to this act, 15 Geo. 3. is, that it professes to vest in Watt the exclusive property in an entire machine, notwithstanding the invention, which he claims to be his, is admitted of an improvement only of a known machine. And upon this point it is to be observed, that Lord Coke says, (3 Inst. 184) "such a privilege, as is consonant to law, must be substantially and essentially newly invented; but, if the substance was in esse before, and a new addition thereunto, though that addition make the former more profitable, yet it is not a new manufacture in law." The act is also defective, in not setting forth any specification of a formed instrument or machine; it is, indeed, admitted, that no such specification is to be found.

If the subject be viewed as arising from the patent and act taken together, the arguments which have been already used, respecting those instruments separately, apply themselves more strongly, inasmuch as if the act be considered as explanatory of the patent, or as a part of it, there cannot be a doubt but that it means to grant a monopoly for a formed engine or machine. Upon

the whole, therefore, of the case it appears, either that the patent is for an entire formed machine, when it ought to have been for an improvement only, and in which case the specification does not correspond with it; or it is for mere principles, which, according to the stat. 21 Jac. 1. cannot be the subject of a patent.

The following is the substance of the reply. The patent is neither for a formed instrument, nor is the specification for a principle unorganised. The former is for "a new invented method of lessening the consumption of steam and fuel in fire-engines," by whatever mode that effect may be produced: the latter states both the principle of the invention, and also the mode in which it is to operate; namely, the preserving the cylinder hot by the means described, and the condensing the steam in separate vessels communicating with the cylinder. The difference in the terms used in the patent and the specification, arises from the nature of the subject; but the real meaning of them is the same. Where an improvement is made upon a machine already known, the patent ought not to be for the machine itself, but for the method of improving it. Thus, a patent was granted in 1759, to one Wood, for "a scheme to work a fire-engine at half the expense of coals," an effect which must have been caused by an alteration of the engine; yet the patent was for the scheme or method, and not for the engine itself. And, in the case of an improvement in making watches, Jessop's patent was avoided, because it was for the whole watch,

when the invention consisted of only one movement. But, notwithstanding this rule; if from the nature of the thing, a patent for the new method or improvement only should have the effect of giving a right to the whole machine, that is not of itself a ground on which the patent can be set aside.

After consideration, the judges thus delivered their respective opinions.

Mr. Justice ROOKE, after stating the special case at length, thus proceeded. From this state of the case, and from the admission of counsel on both sides, I assume the following facts, namely, that the plaintiff Watt is the inventor of a new and useful improvement in fire-engines, whereby the consumption of steam, and consequently of fuel, is considerably lessened: that the improvement is of such a nature, that it may legally be the object of protection by royal patent: that a patent has been granted to the inventor, on the condition of a specification of the nature of the invention: that a specification has been made, sufficient to enable a mechanic to construct fire-engines containing the improvement invented by the patentee; and that the legislature, six years after the patent had been granted, thought proper to extend the duration of it from the eight years then to come, to twenty-five years; the patent having been granted in the ninth, and the statute having passed in the fifteenth year of the present king.

Under these circumstances, I think I conform to the spirit of the stat. 21. Jac. I. c. 3. s. 6. if I in-

cline to support this patent, provided it may be supported without violating any rule of law ; and I think so for two reasons : first, because the patentee is substantially entitled to the protection of the patent ; and secondly, because the public are sufficiently instructed, and will be duly benefited by the specification. Against the claim of the patentee, certain objections have been made, which, it is contended, deprive him of all legal right to that protection. First, it is objected that the patent is not for fire-engines upon the particular construction which contains this new improvement, but for a new invented method of lessening the consumption of steam and fuel : secondly, it is objected that no particular engine is described in this specification, but that it only sets forth the principles ; and the last objection is, that the statute has not duly prolonged the patent, because the patent is for a method, and the statute for an engine. It is obvious that these objections are merely formal ; they do not affect the substantial merits of the patentee, nor the meritorious consideration which the public have a right to receive, in return for the protection which the patentee claims. With regard to the first objection, it is, that the patent is not for a fire-engine of a particular construction, but for a new invented method. It pre-supposes the existence of the fire-engine, and gives a monopoly to the patentee of his new invented method of lessening the consumption of steam and fuel in fire-engines. The obvious meaning of these words is, that he has made an improvement in the construction of fire-engines ; for what does

method mean, but mode or manner of effecting? What method can there be of saving steam or fuel in engines, but by some variation in the construction of them? A new invented method, therefore, conveys to my understanding the idea of a new mode of construction. I think those words are tantamount to fire-engines of a newly invented construction; at least I think they will bear this meaning, if they do not necessarily exclude every other. The specification shews that this was the meaning of the words, as understood by the patentee; for he has specified a new and particular mode of constructing fire-engines. If he has so understood the words, and they will bear this interpretation, then I think this objection, which is merely verbal, is answered. To which I add, that patents for a method or art of doing particular things have been so numerous, according to the lists left with us, that method may be considered as a common expression in instruments of this kind. It would, therefore, be extremely injurious to the interests of patentees, to allow this verbal objection to prevail. As to the second objection, that no particular engine is described, that no model or drawing is set forth, I hold this not to be necessary, provided the patentee so describes the improvement as to enable artists to adopt it when his monopoly expires. The jury find that he has so described it. It is objected that he professes to set forth principles only; but we are not bound by what he professes to do, but by what he has really done. If he had professed to set forth a full specification of his im-

provement, and had not set it forth intelligibly, his specification would have been insufficient, and his patent void. It seems, therefore, but reasonable, that if he sets forth his improvement intelligibly, his specification should be supported, though he professes only to set forth the principle. The term principle is equivocal ; it may denote either the radical elementary truths of a science, or those consequential axioms which are founded on radical truths, but which are used as fundamental truths by those who do not find it expedient to have recourse to first principles. The radical principles on which all steam engines are founded are the natural properties of steam, its expansiveness and condensibility. Whether the machines are formed in one shape or another ; whether the cylinder is kept hot or suffered to cool ; whether the steam is condensed in one vessel or another, still the radical principles are the same. When the present patentee set his inventive faculties to work, he found fire-engines already in existence, and the natural qualities of steam already known and mechanically used. He only invented an improvement in the mechanism, by which they might be employed to greater advantage. There is no newly discovered natural principle as to steam, nor any new mechanical principle in his machine : the only invention is a new mechanical employment of principles already known. As to the specification, some part of it, so much as represents the future intentions of the patentee, may be considered, according to the language of the specification, as merely theoretical ; but the greater

part describes a practical use of improved mechanism, the basis on which the improvement is founded. The object of the patentee was to condense the steam without cooling the cylinder: the means adopted to effectuate this were to inclose the cylinder in a case which will confine the heat or transmit it slowly, to surround it with steam or other heated bodies, and to suffer neither water nor any other substance colder than the steam to enter or touch it during that time. These means are set forth. The objection is, that there is no drawing or model of a particular engine; and where is the necessity of such drawing or model, if the specification is intelligible without it? Had a drawing or model been made, and any man copied the improvement, and made a machine in a different form, no doubt this would have been an infringement of the patent: why? because the mechanical improvement would have been introduced into the machine, though the form was varied. It follows from thence, that the mechanical improvement, and not the form of the machine, is the object of the patent: and if this mechanical improvement is intelligibly specified, of which a jury must be the judges, whether the patentee calls it a principle, invention, or method, or by whatever other appellation, we are not bound to consider his terms, but the real nature of his improvement, and the description he has given of it; and we may, I think, protect him, without violating any rule of law. As to the articles of the specification which denote intention only, and do not state the thing to which

it is to be applied, I do not think he could maintain an action for breach of these articles; for he cannot anticipate the protection before he is intitled to it by practical accomplishment. But the patent is for a method already adopted, and the two first and most material articles are set forth as already accomplished, and the case states it was new and useful, at the time of making the patent. I therefore consider the most essential part of the patent, the keeping the cylinder hot, inclosing it in a case, and surrounding it with steam, as carried into practical effect at the time of granting the patent: this the defendant has infringed, and I will presume, after a verdict, where nominal damages only are given, that the evidence was applied to, and the damages given for those articles only which are well specified. Now, if he has infringed those articles which are well specified, he shall not be excused from an action; because he has been guilty of an additional infringement on that which is specified as matter of intention only. As to the objection of the want of a drawing or model, that at first struck me as of great weight. I thought it would be difficult to ascertain what was an infringement of a method, if there was no additional representation of the improvement or thing methodized. But I have satisfied my mind thus; infringement or not, is a question for the jury: in order to decide this case, they must understand the nature of the improvement or thing infringed; if they can understand it without a model, I am not aware of any rule of law which requires a model

or a drawing to be set forth, or which makes void an intelligible specification of a mechanical improvement, merely because no drawing or model is annexed. In the present case, I do not hear that the want of a drawing or a model occasioned any difficulty to the jury; they have expressly decided that Mr. Watt has the merit of a new and useful invention, and that this invention was infringed by the defendant. How then can I say that they could not understand it for the want of a drawing? Especially when they have added, that the specification is sufficient to enable a mechanic, acquainted with the fire-engines previously in use, to construct fire-engines producing the effect of lessening the consumption of fuel and steam, upon the principle invented by the plaintiff. For these reasons, I think the second objection, that no particular engine is set forth, is not of sufficient weight to destroy the effect of the patent.

Mr. Justice HEATH.—This patent is expressly for a new invented method for lessening the consumption of steam and fuel in fire-engines. It appears that the invention of the patentee is original, and may be the subject of a patent: but the question is, in as much as this invention is to be put in practice by means of machinery, whether the patent ought not to have been for one or more machines, and whether this is such a specification as entitles him to the monopoly of a method? If method and machinery have been used by the patentee as convertible terms, and the same consequences would result from both, it

might be too strong to say that the inventor should lose the benefit of his patent by the misapplication of the term. In truth it is not so. His counsel have contended for the exclusive monopoly of a method of lessening the consumption of steam and fuel in fire-engines, and that therefore would better answer the purposes of the patentee, for the method is a principle reduced to practice; it is in the present instance the general application of a principle to an old machine. There is no doubt that the patentee might have a patent for his machinery, because the act of parliament he obtained acknowledged his patent, and he himself, in 1782, procured a patent for his invention of certain new improvements upon steam and fire-engines, for raising water, &c. which contained new pieces of mechanism applicable to the same. Upon this statement the following objections arise to the patent, which I cannot answer; viz. that if there may be two different species of patents, the one for an application of a principle to an old machine, and the other for a specific machine, one must be good and the other bad. The patent that admits the most lax interpretation should be bad, and the other alone conformable to the rules and principles of common law, and to the statute on which patents are founded. The statute of 21 Jac. I. prohibits all monopolies, reserving to the King, by an express proviso, so much of his ancient prerogative as shall enable him to grant letters patent, and grants of privilege, for the term of fourteen years or under, of the sole working or

making of any manner of new manufactures within this realm, to the true and first inventor and inventors of such manufactures. What then falls within the scope of the proviso? such manufactures as are reducible to two classes. The first class includes machinery, the second substances, (such as medicines) formed by chemical and other processes, where the vendible substance is the thing produced, and that which operates preserves no permanent form. In the first class the machine, and in the second the substance produced, is the subject of the patent. I approve of the term manufacture in the statute, because it precludes all nice refinements, it gives us to understand the reason of the proviso, that it was introduced for the benefit of trade. That which is the subject of a patent ought to be specified, and it ought to be that which is vendible, otherwise it cannot be a manufacture: this is a species of new manufacture, and the novelty of the language is sufficient to excite alarm. It has been urged that other patents have been litigated and established; for instance, Dollond's, which was for a refracting telescope. I consider that as substantially an improved machine. A patent for an improvement of a refracting telescope, and a patent for an improved refracting telescope, are in substance the same. The same specification would serve for both patents; the new organization of parts is the same in both. I asked in the argument for an instance of a patent for a method, and none such could be produced. I was then pressed with patents for chemical processes, many of which are for a method, but that is from

an inaccuracy of expression, because the patent in truth is for a vendible substance. To pursue this train of reasoning still further, I shall consider how far the arguments in support of this patent will apply to the invention of original machinery, founded on a new principle. The steam engine furnishes an instance. The Marquis of Worcester discovered in the last century the expansive force of steam, and first applied it to machinery. As the original inventor, he was clearly entitled to a patent. Would the patent have been good applied to all machinery, or to the machines which he had discovered? The patent decides the question. It must be for the vendible matter, and not the principle. Another objection may be urged against the patent, upon the application of the principle to an old machine, which is, that whatever machinery may be hereafter invented, would be an infringement of the patent, if it be founded on the same principle. If this were so, it would reverse the clearest positions of law respecting patents for machinery, by which it has been always holden, that the organization of a machine may be the subject of a patent, but principles cannot. If the argument for the patentee were correct, it would follow that where a patent was obtained for the principle, the organization would be of no consequence. Therefore, the patent for the application of the principle must be as bad as the patent for the principle itself. It has been urged for the patentee, that he could not specify all the cases to which his machinery could be applied. The answer seems obvious, that what he cannot specify he has not

invented. The finding of the jury that steam engines may be made upon the principle stated by the patentee, by a mechanic acquainted with the fire-engines previously in use, is not conclusive. This patent extends to all machinery that may be made on this principle, so that he has taken a patent for more than he has specified; and as the subject of his patent is an entire thing, the want of a full specification is a breach of the conditions, and avoids the patent. Indeed, it seems impossible to specify a principle and its application to all cases, which furnishes an argument that it cannot be the subject of a patent. It has been usual to examine the specification, as a condition on which the patent was granted. I shall now consider it in another point of view. It is a clear principle of law, that the subject of every grant must be certain. The usual mode has been for the patentee to describe the subject of it by a specification; the patent and the specification must contain a full description: then in this, as in most other cases, the patent would be void, for the uncertain description of the thing granted, if it were not aided by the statute. The grant of a method is not good, because uncertain; the specification of a method, or the application of principle is equally so, for the reasons I have alleged.

Mr. Justice BULLER.—Few men possess more ingenuity, or have greater merit with the public, than the plaintiffs on this record; and if their patent can be sustained in point of law, no man ought to envy them the profits and advantages

arising from it. Even if it cannot be supported, no man ought to envy them the profits which they have received, because the world has undoubtedly derived great advantages from their ingenuity. We are called upon to deliver our opinions on the dry question of law, whether, upon the case disclosed to us, this patent can or cannot be sustained? I shall deliver my opinion first upon the case itself, and secondly on the arguments which have been urged at the bar.

The case states the plaintiff's patent, the specification, and the act of parliament. It gives a description of the old engine, and then states that the invention of the plaintiff is a new and useful one; and that the specification is sufficient to enable a mechanic to construct fire-engines, producing the effect of lessening the consumption of fuel and steam in fire-engines, upon the principle invented by Mr. Watt. One objection made by the defendant was, that it did not appear on the case that a mechanic could, from the specification, construct an engine which should lessen the consumption of fuel and steam with equal effect, or to the same extent, as Mr. Watt himself did. If the negative appeared, namely, that a mechanic could not from the specification make an engine with equal effect, or if it required expense and experiments before it could be done, I agree that either of those facts would avoid the patent; but that is not so stated: and upon this case, I think, we are bound to say there is no foundation for either of these objections. There is another objection to the case, which I think more important,

and that is, that the jury have not told us wherein the invention consists; whether it be in an additional cylinder or other vessel to the old machine, or what the addition is, or whether it be only in the application of the old parts of the machine, or in what is called at the bar, the principle only, or in what that principle consists. These defects have opened a great field of argument, and have driven the plaintiffs counsel to the necessity of endeavouring to support his case on all possible grounds. The old engine consisted of a cylinder, a boiler, a pipe which occasionally communicated between them, an injection cistern, and pumps. The two material parts of the new engine, as mentioned in the specification, are the old cylinder, now called the steam vessel, and the vessel now called the condenser; which, it is said, must be distinct from the steam vessel, though occasionally communicating with it. The old boiler did occasionally communicate with the cylinder. The pumps, grease, and other things are admitted to be trifling circumstances, and not worthy any observation. Upon this state of the case, I cannot say that there is any thing substantially new in the manufacture; and, indeed, it was expressly admitted on the argument, that there was no new particulars in the mechanism: that it was not a machine or instrument which the plaintiffs had invented: that mechanism was not pretended to be invented in any of its parts: that this engine does consist of all the same parts as the old engine: and that the particular mechanism is not necessary to be considered. The

fact of there being nothing new in the engine, drove the counsel to argue on very wide grounds, and to touch on the possibility of maintaining a patent for an idea or a principle, though I think it was admitted that a patent could not be sustained for an idea or a principle alone.

The very statement of what a principle is, proves it not to be a ground for a patent: it is the first ground and rule for arts and sciences, or in other words, the elements and rudiments of them. A patent must be for some new production from those elements, and not for the elements themselves. The plaintiff's case is considerably distressed in many parts of it, and as it seems to me, the arguments which have been adduced were very much calculated to keep clear of difficulties, which the counsel foresaw might be introduced into the case; as first, that unless the principle can be supported as the ground of the patent, there may be some danger of confirming the defendant's objection to it; secondly, that unless the principle can be supported it may open a fatal objection to the specification, because that does not state in what manner the new machine is to be constructed, how it varies from the old one, or in what way the improvements are to be added; or, thirdly, because the patent embraces the whole principle, and is founded on that alone, but the invention is taken to consist of an improvement or addition only. Another objection may arise both to the patent and specification, viz. that the patent is granted for the whole engine, and not for the addition and improvement only.

Perhaps it may be convenient and judicious to keep these objections as much as possible in the back ground, and out of the view of the court. But it is our duty to sift and dive into the facts and circumstances of the case, and the bearings and consequences of them, as far as our abilities or knowledge of the subject will admit. There is one short observation arising on this part of the case, which seems to me to be unanswerable, and that is, that if the principle alone be the foundation of the patent, it cannot possibly stand, with that knowledge and discovery which the world were in possession of before. The effect, the power, and the operation of steam were known long before the date of this patent; all machines, which are worked by steam, are worked by the same principle. The principle was known before, and therefore if the principle alone be the foundation of the patent, though the addition may be a great improvement, (as it certainly is,) yet the patent must be void, *ab initio*. But then it was said, that though an idea or principle alone would not support the patent, yet that an idea reduced into practice, or a practical application of a principle, was a good foundation for a patent, and was the present case. The mere application or mode of using a thing was admitted in the reply not to be a sufficient ground; for on the court putting the question, whether if a man by science were to devise the means of making a double use of a thing known before, he could have a patent for that, it was rightly and candidly admitted he could not. The method and the

mode of doing a thing are the same, and I think it impossible to support a patent for a method only, without having carried it into effect, and produced some new substance. But here it is necessary to enquire, what is meant by a principle reduced into practice? It can only mean a practice founded on principle, and that practice is the thing done or made, or in other words, the manufacture which is invented.

This brings us to the true foundation of all patents, which must be the manufacture itself, and so says the statute, 21 James I. c. 3. All monopolies, except those which are allowed by that statute, are declared to be illegal and void. They were so at common law, and the sixth section excepts only those of the sole working or making any manner of new manufacture; and whether the manufacture be with or without principle, produced by accident or by art, is immaterial. Unless this patent can be supported for the manufacture, it cannot be supported at all. I am of opinion, that the patent is granted for the manufacture, and I agree with my brother Adair, that verbal criticisms ought not to avail, but that 'principle' in the patent, and the 'engine' in the act of parliament mean, and are the same thing. Besides, the declaration is founded on a right to the engine, and therefore unless the plaintiffs can make out their right to that extent, they must fail. In most of the instances of the different patents, mentioned by my brother Adair, the patents were for the manufacture, and the specification rightly stated the method by which the

manufacture was made ; but none of them go the length of proving, that a method of doing a thing without the thing being done, or actually reduced into practice, is a good foundation for a patent. When the thing is done or produced, then it becomes the manufacture, which is the proper subject for a patent. Dollond's patent was for object glasses, and the specification properly stated the method of making those glasses. As I mentioned in the course of the argument, the point contested in that case was, whether Dollond or Hall was the first and true inventor within the meaning of the statute, Hall having first made the discovery in his own closet, but never made it public ; and on that ground Dollond's patent was confirmed. Mechanical and chemical discoveries all come within the description of manufactures, and it is no objection to either of them, that the articles of which they are composed were known, and were in use before, provided the compound article, which is the object of the invention, is new. But then the patent must be for the specific compound, and not for all the articles or ingredients of which it is made. The first inventor of a fire-engine could never have supported a patent for the method and principle of using iron : nor could Dr. James (supposing his patent had been clear of other objections) have sustained a patent for the method and principle of using antimony. In the first case, the patent must have been for the fire-engine, *eo nomine* ; and in the second, for the specific compound powder. Suppose the world were better informed than it is, how to pre-

pare Dr. James's fever powder, and an ingenious physician should find out that it was a specific cure for a consumption, if given in particular quantities: could he have a patent for the sole use of James's powder in consumptions, or to be given in particular quantities? I think it must be conceded that such a patent would be void; and yet the use of the patent would be new, and the effect of it as materially different from what it is now, as life is from death. So in the case of a late discovery, which, as far as experience has hitherto gone, is said to have proved efficacious; that of the medical properties of arsenic in curing agues, could a patent be supported for the sole use of arsenic in aguish complaints? The medicine is the manufacture, and the only object of a patent, and as the medicine is not new, any patent for it, or for the use of it, would be void. The case of water tabbies, which has often been mentioned in Westminster Hall, may afford some illustration of the subject. The invention first owed its rise to the accident of a man's spitting on a floor cloth, which changed its colour, from whence he reasoned on the effect of intermixing water with oil or colours, and found out how to make water tabbies, and had his patent for water tabbies only: but if he could have had a patent for the principle of intermixing water with oil or colours, no man could have had a patent for any distinct manufacture produced on the same principle. Suppose painted floor-cloths to be produced on the same principle, yet as the floor-cloth and the tabby are distinct substances, calculated for

distinct purposes, and were unknown to the world before, a patent for one would be no objection to a patent for another. The true question in this case is, whether the plaintiff's patent can be supported for the engine. I have already said, I consider it as granted for the engine, and if that be the right construction of the patent, that alone lays all the arguments about ideas and principles out of the case. The objections to this patent, as a patent for the engine, are two; first, that the fire-engine was known before; and, secondly, though the plaintiff's invention consisted only of an improvement of the old machine, he has taken the patent for the whole machine, and not for the improvement alone. As to the first, the fact which the plaintiff's counsel were forced to admit, and did repeatedly admit in the terms which I mentioned, viz. that there was nothing new in the machine, is decisive against the patent. And the second objection is equally fatal. That a patent for an addition or improvement may be maintained, is a point which has never been directly decided; and Bircot's case, 3 Inst. 184, is an express authority against it, which case was decided in the Exchequer Chamber. What were the particular facts of that case we are not informed, and there seems to me to be more quaintness than solidity in the reason assigned, which is, that it was to put a new button to an old coat, and it is much easier to add than to invent. If the button were new, I do not feel the weight of the objection that the coat on which the button was to be put was old. But in truth arts and sciences at that

period were at so low an ebb, in comparison with that point to which they have been since advanced, and the effect and utility of improvements so little known, that I do not think that case ought to preclude the question. In later times, whenever the point has arisen, the inclination of the court has been in favour of the patent for the improvement, and the parties have acquiesced, where the objection might have been brought directly before the court. In *Morris v. Branson*, which was tried at the sittings after Easter term 1776, the patent was for making oilet holes or net work in silk, thread, cotton, or worsted; and the defendant objected that it was not a new invention, it being only an addition to the old stocking frame. Lord Mansfield said, after one of the former trials on this patent, "I have received a very sensible letter from one of the gentlemen who was upon the jury, on the subject, whether on principles of public policy there can be a patent for an addition only. I paid great attention to it, and mentioned it to all the judges. If the general point of law, viz. that there can be no patent for an addition, be with the defendant, that is open upon the record, and he may move in arrest of judgment. But that objection would go to repeal almost every patent that ever was granted." There was a verdict for the plaintiffs with 500*l.* damages, and no motion was made in arrest of judgment. Though his lordship did not mention what were the opinions of the judges, or give any direct opinion himself, yet we may safely collect that he thought, on great consideration, the patent

was good, and the defendant's counsel, though they had made the objection at the trial, did not afterwards persist in it. Since that time it has been the generally received opinion in Westminster Hall, that a patent for an addition is good; but then it must be for the addition only, and not for the old machine too. In Jessop's case, as quoted by my brother Adair, the patent was held to be void, because it extended to the whole watch, and the invention was of a particular movement only. It was admitted in the reply, that the patent should be applied to the invention itself: but it was contended, that if in consequence the patent gave a right to the whole engine, that would be no objection. To this I answer, that if the patent be confined to the invention, it can give no right to the engine, or to any thing beyond the invention itself. When a patent is taken for an improvement only, the public have a right to purchase that improvement by itself, without being incumbered with other things. A fire-engine of any considerable size, I take it, would cost about 1200*l.*; and suppose the alteration made by the plaintiff, with a fair allowance for profit, would cost 50 or 100*l.* is it to be maintained, that all the persons who already have fire-engines must be at the expense of buying new ones from the plaintiffs, or be excluded from the use of the improvement? So in the case of the watch, may not other persons in the trade buy the new movement, and work it up in watches made by themselves? Where men have neither fire-engines nor watches, it is highly probable that they will

go to the inventor of the last and best improvements for the whole machine; and if they do, it is an advantage which the inventor gets from the option of mankind, and not from any exclusive right or monopoly vested in him. But here the plaintiffs claim the right to the whole machine. To that extent their right cannot be sustained, and therefore I am of opinion that there ought to be judgment for the defendant.

Lord Chief Justice EYRE.^(a)—Upon this case two questions are reserved for the opinion of the court; the first, whether the patent is good in law, and continued by the act of parliament mentioned in the case? the second, whether the specification, stated in the case, is, in point of law, sufficient to support the patent? As I take it, the facts of the case are stated with a view to the application of them to these questions, and not to any other questions which may be thought to arise upon them. Perhaps, indeed, if the court saw that another material question might arise out of these facts, which had escaped the attention of the court and jury at *nisi prius*, they might direct the case to be amended, or a new trial to be had in order to introduce it. These two questions were thus stated, in order to bring before the court the points of law insisted on upon the part of the defendant, and also to give an opportunity for considering a doubt which occurred to me upon my first view of the case at the trial; which was, Whether a patent-right could attach upon any thing not organized and capable of precise specification? As those two questions are framed,

(a) A good deal of this opinion is adopted by the Court in *The King v Whellan* 2 Barn & Ald. 345.

there are three points for the consideration of the court. First, whether the patent was, in its original creation, good or bad? Secondly, taking it to be good, whether it was continued by the act of parliament? And thirdly, taking it to be good in its original creation, and to have been continued by the act of parliament, subject to an objection for the want of a specification, whether there has been a sufficient specification? Though we have had many cases upon patents, yet I think we are here upon ground which is yet untrodden, at least was untrodden till this cause was instituted; and till the discussions were entered into which we have heard at the bar, and now from the court. Patent rights are no where, that I can find, accurately discussed in our books. Sir Ed. Coke discourses largely, and sometimes not quite intelligibly, upon monopolies in his chapter of monopolies, 3 Inst. 181. ; but he deals very much in generals, and says little or nothing of patent rights as opposed to monopolies. He refers principally to his own report of the Case of Monopolies, 11 Co. 86. b. ; he also mentions a resolution of all the judges in 2 and 3 Eliz. from a manuscript of Dyer, condemning a grant to the corporation of Southampton by Philip and Mary for the sole right of importing Malmsey wine, and that no Malmsey wine should be landed at any other place, upon pain to pay treble customs. He also mentions Bircot's case in the Exchequer Chamber, 15 Eliz. for a privilege concerning the preparing and melting of lead ore, but he states no particulars ; and the principle on which that

case was determined has been, as my brother Buller observes, not adhered to; namely, that an addition to a manufacture cannot be the subject of a patent. There is also a case in Godbolt, 252., and there are a few others condemning particular patents, which were, beyond all doubt, mere monopolies. The modern cases have chiefly turned upon the specifications, whether there was a fair disclosure. Such was the case of *Turner v. Winter* (p. 145). The case of *Edgeberry v. Stephens* (p. 36.) is almost the only case upon the patent right under the saving of the stat. of Jac. 1. that is to be found. That case establishes, that the first introducer of an invention practised beyond sea, shall be deemed the first inventor; and it is there said, the act intended to encourage new devices, useful to the kingdom; and whether acquired by travel or study, it is the same thing. Deriving so little assistance from our books, let us resort to the statute itself, 21 Jac. 1. c. 3. We shall there find a monopoly defined to be, “the privilege of the sole buying, selling, making, working or using any thing within this realm;” and this is generally condemned as contrary to the fundamental law of the land. But the 5th and 6th sections of that statute save letters patent, and grants of privileges, of the sole working or making of any manner of new manufacture within this realm, to the first and true inventor and inventors of such manufactures; with this qualification, “so that they be not contrary to the law, nor mischievous to the state;” in these three respects, first, “by raising the prices of commodities at home;” se-

condly, "by being hurtful to trade;" or, thirdly, by being "generally inconvenient." According to the letter of the statute, the saving goes only to the sole working and making; the sole buying, selling, and using, remain under the general prohibition, and with apparent good reason for so remaining; for the exclusive privilege of buying, selling, and using, could hardly be brought within the qualification of not being contrary to law, and mischievous to the state, in the respects which I have mentioned. I observe also, that according to the letter of the statute, the words "any manner of new manufacture" in the saving, fall very short of the words "any thing," in the first section; but most certainly the exposition of the statute, as far as usage will expound it, has gone very much beyond the letter. In the case of *Edgeberry v. Stephens*, the words "new devices" are substituted and used as synonymous with the words "new manufacture."

It was admitted in the argument at the bar that the word "manufacture" in the statute was of extensive signification; that it applied not only to things made, but to the practice of making, to principles carried into practice in a new manner, to new results of principles carried into practice. Let us pursue this admission. Under things made, we may class, in the first place, new compositions of things, such as manufactures in the most ordinary sense of the word: secondly, all mechanical inventions, whether made to produce old or new effects, for a new piece of mechanism is certainly a thing made. Under the practice of making we

may class all new artificial manners of operating with the hand, or with instruments in common use, new processes in any art producing effects useful to the public.

When the effect produced is some new substance, or composition of things, it should seem that the privilege of the sole working or making ought to be for such new substance or composition, without regard to the mechanism or process by which it has been produced, which, though perhaps also new, will be only useful, as producing the new substance. Upon this ground Dollond's patent was perhaps exceptionable, for that was for a method of producing a new object glass, instead of being for the object glass produced. If Dr. James's patent had been for his method of preparing his powders, instead of the powders themselves, that patent would have been exceptionable upon the same ground. When the effect produced is no substance or composition of things, the patent can only be for the mechanism, if new mechanism is used, or for the process, if it be a new method of operating with or without old mechanism by which the effect is produced.

To illustrate this: the effect produced by Mr. David Hartley's invention for securing buildings from fire, is no substance or composition of things; it is a mere negative quality, the absence of fire: this effect is produced by a new method of disposing iron plates in buildings. In the nature of things the patent could not be for the effect produced; I think it could not be for the making the plates of iron, which, when disposed

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

dent that the patent in almost all these cases cannot be granted for the means by which it acts, for in them there is nothing new, and in some of them nothing capable of appropriation. Even where the most complicated machinery is used, if the machinery itself is not newly invented, but only conducted by the skill of the inventor, so as to produce a new effect, the patent cannot be for the machinery. In Hartley's case it could not be for the effect produced, because the effect, as I have already observed, is merely negative, though it was meritorious. In the list of patents with which I have been furnished, there are several for new methods of manufacturing articles in common use, where the sole merit and the whole effect produced are the saving of time and expense, and thereby lowering the price of the article and introducing it into more general use. Now I think these methods may be said to be new manufactures, in one of the common acceptations of the word, as we speak of the manufactory of glass, or any other thing of that kind. The advantages to the public from improvements of this kind are beyond all calculation important to a commercial country, and the ingenuity of artists who turn their thoughts towards such improvements is in itself deserving of encouragement; and in my apprehension it is strictly agreeable to the spirit and meaning of the stat. 21 Jac. 1. that it should be encouraged; and yet the validity of these patents, in point of law, must rest upon the same foundation as that of Mr. Hartley's. The patent cannot be for the effect

produced, for it is either no substance at all, or, what is exactly the same thing as to the question upon a patent, no new substance, but an old one produced advantageously for the public. It cannot be for the mechanism, for there is no new mechanism employed: it must then be for the method; and I would say in the very significant words of Lord Mansfield in the great case of the copy right (4 Burr. 2397.), it must be for method detached from all physical existence whatever; and I think we should well consider what we do in this case, that we may not shake the foundation upon which these patents stand. Probably I do not over-rate it when I state that two-thirds, I believe I might say three-fourths of all patents granted since the statute passed, are for methods of operating and of manufacturing, producing no new substances and employing no new machinery. If the list were examined, I dare say there might be found fifty patents for methods of producing all the known salts, either the simple salt, or the old compounds. The different sorts of ashes used in manufactures are many of them inventions of great merit, many of them probably mere speculations of wild projectors; the latter ought to fall, the former to stand. If we wanted an illustration of the possible merit of a new method of operating with old machinery, we might look to the identical case now in judgment before the court. If we consider into what general use fire-engines are come, that our mines cannot be worked without them, that they are essentially necessary to the carrying on many of our prin-

cipal manufactures, that these engines are worked at an enormous expense in coals, which in some parts of the kingdom can with difficulty be procured at all in large quantities, it is most manifest that any method found out for lessening the consumption of steam in the engines, which, by necessary consequence, lessens the consumption of coals expended in working them, will be of great benefit to the public, as well as to the individual who thinks fit to adopt it. And shall it now be said, after we have been in the habit of seeing patents granted in the immense number in which they have been granted for methods of using old machinery, to produce substances that were old, but in a more beneficial manner, and also for producing negative qualities by which benefits result to the public, by a narrow construction of the word "manufacture" in this statute, that there can be no patent for methods producing this new and salutary effect, connected, and intimately connected as it is with the trade and manufactures of the country? This I confess I am not prepared to say. An improper use of the word principle in the specification set forth in this case, has, I think, served to puzzle it. Undoubtedly there can be no patent for a mere principle; but for a principle so far embodied and connected with corporeal substances as to be in a condition to act and to produce effects in any art, trade, mystery, or manual occupation, I think there may be a patent. Now this is, in my judgment, the thing for which the patent stated in the case was granted, and this is what the speci-

fication describes, though it miscalls it a principle. It is not that the patentee has conceived an abstract notion that the consumption of steam in fire-engines may be lessened, but he has discovered a practical manner of doing it, and for that practical manner of doing it he has taken his patent. Surely this is a very different thing from taking a patent for a principle; it is not for a principle, but for a process. I have dwelt the more largely upon this part of the case, because, in my apprehension, this is the foundation upon which the whole argument will be found to rest. If upon the true construction of the statute there may be a patent for a new method of manufacturing or conducting chemical processes, or of working machinery so as to produce new and useful effects, then I am warranted to conclude that this patent was in its original creation good. I will next consider the specification before I proceed to the consideration of the questions arising upon the statute for continuing this patent. The specification has reference to the patents and not to the statutes, and therefore it will be proper to consider it in this stage of the argument. I distinctly admit that if this patent is to be taken to be a patent for a fire-engine, the specification is not sufficient; it is not a specification of mechanism of any determinate form, having component parts capable of precise arrangement and of particular description. On the other hand, if the patent is not for a fire-engine, but in effect for a manner of working a fire-engine so as to lessen the consumption of steam,

which, as I conceive, the words of the patent import, let us see whether this specification does not sufficiently describe a manner of working fire-engines so as to produce the effect expressed in the patent, and whether the only objection to the specification is not that it is loaded with a redundancy of superfluous matter. The substance of the invention is a discovery that the condensing the steam out of the cylinder, and protecting the cylinder from the external air, and keeping it hot to the degree of steam heat, will lessen the consumption of steam. This is no abstract principle, it is in its very statement clothed with practical application: it points out what is to be done in order to lessen the consumption of steam. Now the specification of such a discovery seems to consist in nothing more than saying to the constructor of a fire-engine, "for the future condense your steam out of the body of the cylinder instead of condensing it within it, put something round the cylinder to protect it from the external air and to preserve the heat within it, and keep your piston air tight without water." Any particular manner of doing this, one should think would hardly need to be pointed out, for it can scarcely be supposed that a workman capable of constructing a fire-engine, would not be capable of making such additions to it as should be necessary to enable him to execute that which the specification requires him to do. But if a very stupid workman should want to know how to go about this improvement, and in answer to his question was directed to conduct the steam which

was to be condensed, from the cylinder into a close vessel by means of a pipe and a valve communicating with the cylinder and the close vessel, to keep the close vessel in a state of coldness sufficient to produce condensation, and to extract from it any part of the steam which might not be condensed by the pump, and was also told to inclose the cylinder in a wooden case, and to use a resinous substance instead of water to keep the piston air tight, can it be imagined that he would be so stupid as not to be able to execute this improvement with the assistance of these plain directions? If any man could for a moment imagine that this was possible, I observe that this difficulty is put an end to, because the jury have found that a workman can execute this improvement in consequence of the specification. Some machinery it is true must be employed, but the machinery is not of the essence of the invention, but incidental to it. The steam must pass from the cylinder to the condensing vessel, for which purpose there must be a valve to open, a pipe to convey, and a vessel to receive the steam; but this cannot be called new invented machinery, whether considered in the parts or in the whole, and therefore there can be no patent for this addition to the fire-engines. Suppose a new invented chemical process, and the specification should direct that some particular chemical substance should be poured upon gold in a state of fusion, it would be necessary, in order to this operation, that the gold should be put into a crucible, and should be melted in that crucible, but it would be hardly

necessary to state in the specification the manner in which, or the utensils with which the operation of putting gold into a state of fusion was to be performed. They are mere incidents with which every man acquainted with the subject is familiar. Some observations were made in the course of the argument at the bar, on its being left unascertained both in the specification and in the case, to what extent the consumption of steam would be lessened by the invention; but the method does not profess to ascertain this, it professes to lessen the consumption; and, to make the patent good, the method must be capable of lessening the consumption to such an extent, as to make the invention useful: more precision is not necessary, and absolute precision is not practicable. The quantity of steam which will be saved in each machine must depend upon a great variety of circumstances respecting each individual fire-engine, such as the accuracy of casting or boring the cylinder, or the dimensions of it, the accuracy of the workman in putting his apparatus together, the care in keeping the cylinder in a proper degree of heat, and the more or less perfect order for working, in which the engine is kept: all these circumstances will affect the quantity of steam to be lessened. Some weighty observations have been made upon parts of this specification, but those parts appear to me not properly to relate to the method described in the patent; they are rather intimations of new projects of improvement in fire-engines, and some of them, I am very ready to confess, either very loosely de-

scribed or not very accurately conceived: I do not undertake to pronounce which, but one or other is pretty clear. They are the 4th and 5th articles: the 1st, 2d, 3d, and 6th, appear to me to belong to this method, and very clearly to point out and explain the method to every man who has a common acquaintance with the subject, and to be intelligible even to those who are unacquainted with it. If there be a specification to be found in that paper, which goes to the subject of the invention as described in the patent, I think the rest may very well be rejected as superfluous. If indeed the defendant could have shewn that he had not pirated the invention which is sufficiently specified, but that what he hath done hath a reference to another method of lessening the consumption of steam, to which the questionable parts of the specification were meant to relate, the objection to the specification would have remained, and perhaps some other objections which have been alluded to, might have been taken both to the patent and specification. But I would observe here, that with regard to this and some other difficulties, there is no question reserved in this case respecting the infringement of the patent; the general fact only is stated, that it has been infringed by the defendant, and in the consideration of a case reserved, we are not to search for difficulties upon which the parties have not proposed to state any point to us for our judgment, and into which I think we are not at liberty to go. The difficulty which struck me, as it did my brother Buller, with respect to the de-

claration, is applied to the patent as it originally stood, not as it now stands, continued by the act of parliament; if we were at liberty to go into it, that difficulty might perhaps produce a nonsuit, and that nonsuit a new action, in which the difficulty would be removed. But this cause was instituted to try the merits of the patent; I thought therefore that a formal objection was wisely overlooked. Supposing then the difficulty upon the patent itself and the specification to be got over, the act of parliament remains to be considered. The objection, stated in the strongest manner, would amount to this, that the act continues a patent for a machine, when in fact the patent is for a process. It is to be observed that there is nothing technical in the composition or the language of an act of parliament: in the exposition of statutes the intent of parliament is the guide. It is expressly laid down in our books, I do not here speak of penal statutes, that every statute ought to be expounded, not according to the letter but the intent. 2 Roll. Abr. 118. Plowd. 350, 363. This doctrine has been carried into effect by cases: though a corporation be misnamed in an act of parliament, if it appears that the corporation was intended it is sufficient. 11 Co. 57. b. So the statute of *Quia emptores terrarum* has said that every one shall hold of the lord paramount *secundum quantitatem terræ*, but this shall be construed to be, *secundum valorem terræ*, for so was the intent. Plowd. 10. 57. We all know that an act of parliament may be extended by equity. No authority has been cited which amounts to proof

that a mistake in point of description in an act of parliament of this nature, when the true meaning can be discovered, and when there is a foundation on which the act can be supported, shall vitiate it. The case cited from Plowden differs essentially from this case. The act of parliament in that case gave effect to a supposed legal attainder, and proceeded upon it altogether: if the groundwork fell and there was no legal attainder, nothing remained; the supposed attainder in that case fell, consequently all fell. Now the difference between that case and the present is this, here the true patent meant to be described exists, and may therefore be a ground work to support the act. This case was compared to the case of the king being deceived in his grant, but I am not satisfied that the king, proceeding by and with the advice of parliament, is in that situation, in respect of which he is under the special protection of the law, and that he could on that ground be considered as deceived in his grant; no case was cited to prove that position. The objection on the act of parliament is of the same nature as one of the objections to the specification; the specification calls a method of lessening the consumption of steam in fire-engines a principle, which it is not; the act calls it an engine, which perhaps also it is not; but both the specification and statute are referable to the same thing, and when they are taken with their correlative are perfectly intelligible. Upon the wider ground I am therefore of opinion that the act has continued this patent. A narrower ground was taken in

the argument, which was to expound the word engine in the body of this act, in opposition to the title of it, to mean a method; and I am ready to say, I would resort to that ground, if necessary, in order to support the patent, *ut res magis valeat quam pereat*. But it is not necessary: for let it be remembered, that though monopolies in the eye of the law are odious, the consideration of the privilege created by this patent is meritorious, because, to use the words of Lord Coke, “the inventor bringeth to, and for the commonwealth, a new manufacture by his invention, costs, and charges.” I conclude, therefore, that the judgment of the court ought to be for the plaintiff.

The court being thus equally divided, no judgment was given.

This question came afterwards to be decided in the court of King’s Bench, in the case of Hornblower v. Boulton, (hereafter given) which went thither by error from the court of Common Pleas.



IN THE COURT OF KING’S BENCH.

Cameron v. Gray.

13 June, 1795.

MR. GASELEE moved to change the venue in this action, which was for infringing the plaintiff’s patent, from Middlesex to Northumberland, upon

the common affidavit that the cause of action arose in the latter county.

LORD KENYON.—The plaintiff cannot make the proper and necessary affidavit, that the cause of action arose wholly in Northumberland, and not elsewhere, when it is manifest, that the substratum of the action, namely, the patent, is at Westminster.

Rule refused.

IN THE COURT OF KING'S BENCH.

Hornblower and Maberley, against Boulton and Watt, in error.

25 Jan. 1799.

THIS was an action on the case, brought in the court of Common Pleas, by the defendants in error, against the plaintiffs in error, for infringing a patent.

The declaration stated letters patent granted by the king, dated 5 Jan. 9 Geo. 3. in which, after reciting that Watt, one of the plaintiffs below, had invented "a method of lessening the consumption of steam and fuel in fire-engines," was granted to Watt, his executors, administrators, and assigns, the sole privilege of "making, using, exercising, and vending his said invention" for fourteen years, and by which letters patent, all