THE

LAW OF PATENTS

FOR INVENTIONS;

INCLUDING THE

REMEDIES AND LEGAL PROCEEDINGS IN RELATION TO

PATENT RIGHTS.

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PREFACE.

THE subject of Patent Rights has become of great importance in the United States, on account of the number of persons interested in them, their influence on the progress of the useful arts, and the numerous judicial decisions relating to them. The exclusive privilege granted to inventors, by the act of 21 James I., c. 3, has, until within a few years past, been regarded with jealousy in English jurisprudence, as being a surviving branch of monopolies, all of which, excepting those for new manufactures, were suppressed by that act. Patents have, however, been recently regarded with greater indulgence, by the English courts. In the United States they have always been fairly sustained, and patentees have been regarded with favor, as pioneers in the advancement of the productiveness of the national industry; and much light has been shed upon this branch of law by the elaborate opinions given by the most eminent judges in the national courts, particularly the late Chief Justice Marshall, and the other judges in the Supreme Court, and by Mr. Justice Washington in the Circuit Court for Pennsylvania, and Mr. Justice Livingston and Mr. Justice Thompson in that for New York. But it is no injustice to the other eminent jurists of the country to say, that this department of law has been more especially indebted to the learning and talents of Mr. Justice Story, the records of whose indefatigable research and luminous expositions, will be found in many parts of this volume.

The decisions, both English and American, down to 1822, had been digested and arranged in Mr. Fessenden's second edition of his very useful work on Patents, published at that time, but the numerous subsequent decisions, as well as the subsequent legislation, seemed to call for a new work upon the subject.

Nearly half of the following treatise was already printed, when I learned that a new patent law was reported to Congress at its last session, whereupon the press was stopped, and the publication delayed, to await the proceedings of the legislature. The proposed act was finally passed on the 4th of July last, by which all the former acts on the same subject were repealed. The former acts will of course remain in force in some respects in application to patents subsisting when they were repealed, since it must depend upon the laws as they are at the time of issuing a patent, whether the subject is patentable, the specification sufficient, and the proper steps taken to secure the exclusive privilege. Though the act of 1836 should have made ever so extensive alterations in these particulars, still it would have been necessary to present the former laws, as well as the provisions of the new one, in a treatise published at the present time. But, in fact, the new law has not made any material alterations in regard to what may be the subject of a patent, and what is a sufficient specification. It partially follows the former laws in other respects, but, as will appear in various parts of the following treatise, makes many important alterations, some of rather an experimental character, but others, which are undoubtedly improvements: so that on the whole, the law now stands materially better than it did before the act was passed.

I have been indebted to the assistance of Edward Pickering, Esq., in collecting, analyzing and digesting the cases.

W. P.

Boston, *Nov.* 10, 1836.

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TREATISES ON THE LAW OF PATENTS.

An Essay on the Law of Patents for New Inventions, to which are prefixed two chapters on the General History of Monopolies, and on their introduction and progress in England to the time of the interregnum, with an Appendix containing copies of the Caveat, Petition, Oath, and other Formula, with an Arranged Catalogue of all the Patents granted from January 1800 to the present time. Second Edition. By John Dyer Collier. London: 1803.

This work consists of 200 pages, large 8vo., with an Appendix of 116 pages.

The Law and Practice of Patents for Inventions. By William Hands, Gent., one of the Solicitors of the Court of Chancery. London: 1808.

This is a small volume of 148 pages, 8vo.

A Collection of the most Important Cases respecting Patents of Invention, and the Rights of Patentees which have been decided since the Statute for the restriction of Monopolies, followed by some Practical Observations. By John Davies. 1816.

This is a work in high estimation, and is often cited in the following treatise. It is a volume of 452 pages, large 8vo, 415 of which are occupied by reports of cases, and the remainder by the practical observations of the author.

A Practical Treatise on the Law of Patents for Inventions and of copyright. By Richard Godson. London: 1823.

Mr. Godson was the first English author who arranged the Patent Laws in the form of a methodical digested treatise. His work consists of 452 pages 8vo., 201 of which are occupied by his introduction on the subject of monopolies, and his digest of the jurisprudence on patents. The remainder is occupied with the law of copyright, legal proceedings in patent and copyright cases, and an appendix containing forms, and the

act of 21 James I., c. 3, (1623,) commonly called the *Statute* of *Monopolies.*

A Supplement to a Practical Treatise on the Law of Patents for Inventions, with Suggestions of many Alterations in that law, and an Abstract of the Laws in force in America, Spain, Austria, Netherlands and France. By Richard Godson, M. P. Barrister at Law. London: 1832.

This publication brings the digest of cases to 1832, and contains some cases not reported elsewhere.

An Analysis of the Law of Patents. By Robert Richard Rankin. London: 1824.

This is a small but valuable treatise of 117 pages, 12mo.

A Practical Treatise of the Law of Patents for Inventions. By Edward Holroyd, Esq. Barrister at Law, Commissioner of Bankrupts. London: 1830.

This work consists of 219 pages, large 8vo, 188 being text, and 31 of Appendix.

Repertory of the Arts. London.

This periodical gives a list of patents granted, and publishes some of the Specifications, with occasional reports of patent cases. It will be found to be cited for reports of some of the cases mentioned in the following work.

An Essay on the Law of Patents for New Inventions. By Thomas Green Fessenden, Counsellor at Law. Second Edition. Boston: 1822.

This work consists of 425 pages, 8vo., and embraces the English and American decisions down to the time of its publication; arranged and digested in the order of the Sections of the act of Congress of Feb. 21, 1793. Mr. Fessenden has an interesting introduction of some length on the progress and importance of the useful arts.

Letter to the Secretary of State transmitting a list of all Patents granted by the United States; the Acts of Congress relating thereto, and the decisions of the Courts of the United States under the same. January 13, 1831.

This is a report by Doct. Thomas P. Jones, made to the Secretary of State in pursuance of a resolution of the House of Representatives, April 2, 1830. The author of this report was formerly Superintendant of the Patent Office, and is scientifically and practically skilled in the subject of useful arts and inventions, and familiar with the law and practice on the subject of patents.

Journal of the Franklin Institute. Philadelphia. Edited by Thomas P. Jones, M. D.

In this Journal, Dr. Jones gives a list of Patents granted, some of the Specifications at length; and remarks upon the patents, with occasional reports of patent cases, and communications relating to the subject of Patent rights.

Traité des Brevets D'Invention, &c. A Treatise concerning Patents for Inventions, for Improvements and for Importations, [inventions introduced from abroad] followed by an Appendix, containing the Laws and regulations enacted in France, an abstract of the English Legislation; the Laws of the United States and of Spain. By Augustin Charles Renouard, Advocate of the Court Royal of Paris. Paris: 1825.

This is the most elaborate work on Patents that has been published in France, which has come to my knowledge. The treatise consists of 417 pages, 8vo., and the Appendix of 84 pages. It has not, to my knowledge, been translated into English. It will be found to be frequently cited in the following treatise.

De La Legislation et de la Jurisprudence, &c. Of the Legislation and the Jurisprudence concerning Patents for Inventions, Improvements and Importations. By Theodore Regnault. Paris: 1825, 8vo.

The French Law and Practice of Patents, for Inventions, Improvements, and Importations. By A. Perpigna, A. M. L. B., Barrister in the Royal Court of Paris, Member of the Society for the Encouragement of the Arts, &c. Paris: 1832.

This is the title of the work in English, published by the author in France. It consists of 142 pages, large 8vo., and is a very useful practical treatise on the French Patent Laws for English and American inventors, who wish to become acquainted with those Laws, for whose use it is particularly designed. The work has been reprinted in the "Law Library," published in Philadelphia, and makes a part of the fourth volume of that collection.

Law of Patent Inventions. By Blanc de St. Bonnet.

Treatise on Patents. By Cochaud.

The Law of Patents for Inventions, familiarly explained for the use of Inventors and Patentees. By W. Carpmael. London: 1832. Second Edition, 1836.

The contents of this work are arranged under the following heads, viz. Patents, Caveats, Proceedings in taking out Patents, the Specification,

the Act of 5 and 6 W. IV, c. 83. (1835) and observations upon it, an Analysis of, and Remarks upon British Patents, Legal Proceedings upon Patents, and Observations upon Patent Laws and the manner of trying Patent causes, with a very full Appendix of Forms. It consists of 128 pages, large 8vo. The author's remarks upon the application of a principle on the subject of a patent, constitute a valuable part of his work.

Report from the Select Committee, on the Law relating to Patents for Inventions, ordered by the House of Commons to be printed June 12th, 1829.

This Report consists of 260 closely printed pages, folio, of which 160 comprise the statements of twenty different persons, barristers at law, engineers, manufacturers, and clerks employed in the patent department, and persons conversant with the practice of taking out patents, viz. John Taylor, Davies Gilbert, John Farey, Mr. Dyer, Mark Isambard Brunel, Arthur Aikin, Charles Few, Francis Abbott, William Newton, Moses Poole, Joseph Merry, Samuel Morton, Samuel Clegg, John Millington, Walter Henry Wyatt, John Macarthy, Benjamin Rotch, John Isaac Hawkins, Arthur Howe Holdsworth, and Thomas Aspinwall.

The Statements of Mr. John Farey and Mr. Benjamin Rotch are very full on the subject of the defects in the British patent law, and the difficulties of sustaining a patent in trials at law. The remaining part of the Report is an Appendix furnished by Mr. John Farey, who appears to be thoroughly acquainted with the British and other patent laws, and the practice in taking out patents, and the trials of patent causes. This Appendix comprises the British legislation on Patents, general and special, down to 1829; reports of the most important patent causes in the English courts; and the legislation on this same subject in France, the Netherlands, Austria, and Spain. The work contains a great body of practical information on patent laws and the practice under them. It is cited in various places in the following treatise, and in some instances in the earlier part by mistake, as a report of 1832 instead of 1829.

LIST OF CASES.

LAW OF PATENT RIGHTS.

CHAPTER I.

Definition.

PATENTS are so called by abbreviation for *letters patent*, that is *open (patentes)* letters, a phrase applied to letters or writings addressed by the government, or by the sovereign, or at least by a superior authority, to individuals, as distinguished from letters sealed up or enclosed, and, like these latter, being directed to individuals, they are by this circumstance distinguished from proclamations addressed to the whole people. The expression *patent* thus substituted for letter patent, is applied to cases of making a grant, as of land, or some privilege, or giving a commission or authority, as in the cases of patents conferring some office. The word *brevet*, used in the French language in a corresponding sense, is applied to a commission or a grant of rank or office, as

brevet of duke.[1] So the French expression for a *patent* in our sense is *brevet d'invention*, or grant of invention; which confers on the person to whom the brevet is granted, the same privilege in respect to an invention, that is enjoyed under other brevets in respect to the office or rank or other thing to which it relates.

In English the dictionaries define a *patent* to be a *writ* granting an exclusive privilege. *A writ (writing)* is commonly used to signify a mandate or commission by the sovereign authority, and in this latter sense corresponds to the French term *brevet*, but it is not applied to mere grants, as of land, and it does not accordingly express the distinguishing characteristic of a *patent*, which is a grant rather than a commission, and does not partake at all of the nature of a mandate; since the grant of a privilege does not import a prohibition on all people not to infringe upon that privilege, any more than grant of a manor implies an injunction upon all other persons not to commit a trespass upon it. There is nothing of *command* essentially belonging to the instrument.

In respect to inventions, then, a patent is a grant by the state, of the exclusive privilege of making, using and vending, and authorizing others to make, use and vend, an invention. It is a monopoly of the invention. The monopoly may be unrestricted, in

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[1] Brevet de duc.

geographical extent, and so be coextensive with the authority of the state or government granting it, or may be confined to a certain territory ; so in respect to duration, it may be for an indefinite or a limited period ; and again in its nature or character it may be either absolute, or subject to certain qualifications and conditions. So again in respect to the persons who may become interested, it may be limited to the patentee personally, as is usual in grants of offices, or extend to him, his personal representatives and assigns.

CHAPTER II.

Principles and Motives of the Legislation on Patent Rights.

PROPERTY in an art, process, or method, is not, like most other species of personal property, susceptible of exclusive manual possession, and, therefore, is not of a description to arise in a very early and rude state of the laws and jurisprudence of a community ; for though a machine or a composition of matter may be appropriated by exclusive possession, it is otherwise with the art of making the machine, and the method

of compounding the materials, and these, as will subsequently be shown more particularly, are the subjects of the discovery, the exclusive right to which is granted by a patent. In respect to things that can be visibly and exclusively possessed, the producer or first occupier is acknowledged, by the laws of nature, to have established his right of property by his possession, and the laws then supervene to guaranty and protect the right. But the exclusive right to the use of a discovery in the arts, must originate in a conventional law: the law must be expressly passed or tacitly recognised, before this right of property can exist. The species of property arises from improvements in the arts, and it is acknowledged and secured only in an improved state of the laws.

M. Renouard, the author of an elaborate French work on Patents, goes into a particular discussion of the question whether an inventor has, by the principles of universal equity, and independently of the positive law, an exclusive right to his invention; and he very satisfactorily establishes the conclusion to which every mind is constrained to yield assent, that no such natural right exists. Indeed there is no plausible ground whatever on which to rest such a right, since the fact of one person being the first inventor or discoverer, affords no pretence for disfranchising others of the right, in their turn, of making and using the same discovery.

If then there is no such natural right, the question

naturally arises, whether the law, granting the exclusive privilege to an inventor, is not unjust? whether it does not wrong other persons, by depriving them of their natural rights? It undoubtedly does take away rights which they would otherwise have, but it does not thence follow that it is unjust. It is the effect of many laws to take away rights which men would enjoy, if each one existed in a state of entire independence of all others, if such a condition were possible; but it does not thence follow that the laws are injurious to any one, since they give more than an equivalent for what they take away. The rights taken from the members of the community generally, are, first, that of discovering or inventing the same thing, independently of the prior invention, and that of using and vending it for a limited time; and second, the right of profiting by the prior invention or discovery of another, for a limited time. This last right is evidently subject to some qualification, for it is certainly just that the inventor should have a greater advantage of his invention than others, whereas if he is exposed to a universal competition in the manufacture and use of his invention, the probability is, that others will turn it to better account than he can himself, since the chances are very great that some one may possess greater advantages for prosecuting the manufacture and selling the article. Without some assistance from the legislature, therefore, he will be deprived of what he is equitably entitled to.

If it be then admitted that he is equitably entitled to the exclusive use and sale for a time, against all others who do not make use of the same invention independently of him, and without deriving any hint or facility from his prior ingenuity or experiments, we have sufficient ground for a law giving him the exclusive right against *all* others for a time, since it is a matter of too much difficulty and intricacy of proof, to distinguish the cases of others who have made the same invention without any assistance from his ingenuity, from those of mere imitations. The law, in order to be practicable and convenient to be administered, must give the exclusive right. To this point the law is only an equitable regulation, which does not *propose* to deprive others of any right in behalf of inventors, but *incidentally* deprives them of a right, which they would otherwise have, because it is necessary for the purpose of doing justice to inventors.

The granting of patents is not, accordingly, a mere matter of favor, as it has sometimes been represented by judges,[1] but an equitable and just claim upon the government, as much so as the claim to protection of individual industry and private property. "The

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[1] "Although," says Mr. Justice Bayley, "the thing may be new in every particular, it is in the judgment of the Crown whether it will or will not, *as a matter of favor*, make the grant." Brenton v. Hawkes, 4 B. & Ald. 552.

patentee," says Lord Eldon, "is a purchaser from the public, being bound to communicate his secret to the public at the expiration of his patent."[2] This right is recognised in very strong and absolute terms in the decree of the French National Assembly.[3] The language is, "Every new idea, of which the manifestation or development might be useful to society, appertains originally to the person who has conceived it; and not to regard a discovery in industry as the property of the discoverer, would be to attack the rights of man in their essence." This language is, however, too comprehensive, as we have already suggested, that the granting of a perpetual exclusive right to an invention, would be a material retrenchment of the rights of others, and so the National Assembly doubtless considered it; for after this preamble they proceed, not to grant such a perpetual privilege, but only a temporary monopoly.

M. Renouard[4] remarks, that "an inventor has not, independently of positive laws, any exclusive property in his invention, any longer than he keeps it secret. That is, others have a right to make the same discovery themselves, independently of him, or to avail themselves of the inventor's disclosure of his secret, and this conflicting right of others, intercepts, and in

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[2] Williams v. Williams, 3 Meriv. 157.
[3] January 7th, 1791. Renouard, p. 423. Ed. of 1825.
[4] P. 32, c. 2, s. 1.

many cases in fact entirely defeats, any advantage to the inventor from a right universally admitted ; for he often cannot use his invention, and at the same time keep it secret, and thus the very attempt to obtain the benefit of his discovery, forfeits it. This strengthens his claim on society, for it is precisely the case of an individual too weak to protect himself, and who, therefore, asks the protection of the community. If he is able to keep his secret, and yet turn it to profitable account, his case is that of the head of a powerful party or clan, who is able to defend and protect himself without the aid of a superior power. Such an inventor is in a condition to make his own terms with the community, for the surrender of his secret; and when the terms proposed by the laws are not satisfactory to him, he may reject them. This is, however, true of but very few inventors. They can, in general, at most only lock up their secret in their own breasts, not being able to turn it to any advantage to themselves, except by means of a law enacted in their behalf. Their claim on the community, therefore, for interposition in their behalf, is exceedingly strong ; they are entitled to assistance from the combined authority of the community, and it is essentially necessary to them.

Though *property* in a discovery, therefore, like that in land, originates in and is created by legislation, the *right* to such property exists to an imperfect degree, independently of the positive laws. In this

view Mr. Rawle remarks, that upon the provisions of the constitution of the United States on this subject, that it was not intended thereby to create rights, but merely to regulate those already existing.[5] The inventor has a *right* to keep his secret, and if he discloses it he has a just claim to remuneration and reward, according to the amount of his expenditure, and the importance of his improvement.

"Many people form an erroneous notion of the kind of merit, and the degree of application, requisite for making improvements in manufactures. They seem to imagine that most of those improvements are lucky hits, which it is only surprising that nobody ever made before; and so they are unwilling to bestow rewards with liberality on such as they conceive owe their success to fortunate accident, rather than to merit. Yet a little reflection may show how erroneous this opinion is. The great mass of useful inventions is made up, and must be, not of what is altogether new, but of improvements in what is already practised. Such improvements, it is also to be remembered, are more eagerly sought after, and by a greater number of competitors, when manufactures have so far advanced as to employ many hands in a single branch. Since then it must be a very limited branch that employs only a thousand persons; how is

[5] Rawle on the Constitution, c. 9, p. 102. Ed. of 1825.

it probable, that in a business where at least that number have been employed for years, any improvement can come to be discovered by chance? Is it not obvious that all the improvements mere chance could bring about, are likely to be discovered at a very early period of such a business; more especially under the operation of a patent law, to give to every eye the quick-sightedness of self-interest? Yet persons are heard thoughtless enough to exclaim, of such an improvement as James Watt's on the steam-engine, 'How simple! and, how wonderful nobody ever found it out before!' They that say of such an invention, 'How simple!' should consider what they mean. If the simplicity they speak of, refers to the adaptation of the means to the end, they are quite right. In this acceptance, simplicity is the very highest merit of an invention; for of all the means that can be used to effect a given end, the simplest are evidently the best. But if when they say, 'How simple!' they mean, how easy to be done, and how easy to be found out, they are as wrong as they can be. For if the contrivance was thus easy to be hit upon, why had it been missed by the numerous persons engaged for so many years before, in the making, in the working, and even in the improving of steam engines? The very simplicity of an invention, which leads the inexperienced to infer little merit or application in the inventor, is most

commonly the sequel of complications, which in succession have been contrived by him, and in succession been rejected. Indeed, who that ever cast a glance of intelligent observation upon our manufactures, or that has ever been struck with the combined simplicity and efficacy of the means employed, can do otherwise than infer that any one of the means that he admires, must have been selected for superiority, when perhaps a thousand others have been rejected? So far from simple means of effecting an end being proportionably obvious to adopt, whoever has opportunities of watching young persons beginning to cultivate any branch of experimental science, may observe that complicated means to effect an end are those they try first; and indeed, whenever there is witnessed, as in the case of Watt, an early or immediate adoption of simple means to accomplish a desirable end, it is safe to infer the possession of great powers, such as experience, in their exercise, can alone inspire. In the attempt of Watt, the only circumstance that can be attributed to chance, was, that a working model of a steam engine came into his hands to be repaired. But what made that model suggest to his mind, inquiries and doubts that had never struck any mind before? No one can read the simple account of his discovery, as given by himself, in his Notes to Dr. Robinson's Works, without being satisfied that when that model came into his hands, it was to undergo a scrutiny,

such as the steam engine in no form had ever before been subjected to."[6]

Another reason for granting this species of monopoly, is, that the whole community has an interest in the advancement of the useful arts, since the greater the perfection to which they are brought, the greater will be the amount of necessaries, conveniences, comforts, luxuries and amusements, within reach of every one, for the same expense. This presents a good reason, not merely for indemnifying the inventor or improver of an art, for his expense of time, labor and outlay, but also for giving him an absolute reward. It would be considered paltry to maintain that a general, who had achieved a victory, was sufficiently compensated by his pay, during the time he gave to the achievement. He is considered a benefactor to his country, and, as such, entitled not merely to his pay, but to a *reward*. So is the inventor of a useful art a benefactor to his country, and to the whole civilized world, and as such entitled to a *reward*. It is a debt due to him; not one that he can demand by virtue of the law of nature, and independently of all civil institutions, but one which it ought to be the early care of the positive laws to acknowledge and satisfy.

Without some encouragement and hope of indemnity for expenses, held out by the law, many inven-

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[6] Westminster Review, No. 43, for January, 1835.

tions, after being made, would not be rendered practically useful. "Very few inventions in manufactures are perfect, when first contrived and introduced into practice. Much further improvement is often needful, in order to overcome unforeseen difficulties, and to meet all the wants of a manufacture conducted on a large scale. Prejudice, too, has to be overcome. The sanction of experience is wanting to confirm the advantage, and still more the permanence of the improvement. After Watt had taken out his patent, he was six years before he succeeded in making one steam engine according to his plan, matured in all its principles at least, as his patent and specification show it to have been. Part of this time was lost, perhaps, by inactivity; another part by the failure of Roebuck, of the Carron Works, with whom he first associated himself, and perhaps a still greater part was owing to the imperfection of machinery in his time. But, making allowances for these causes of delay, still it is true that at least three or four years were necessary, to obviate the practical difficulties that lay in the way of making such an engine well, for the first time. Such difficulties, and others too, attend all important new inventions in manufactures. The bringing of them into notice, the gaining of confidence in their permanence and worth, and the overcoming of prejudice against them, on account of their very novelty, require time, care, and much outlay. To insure success in such an under-

taking, it is not unusual to spend years in overcoming the physical difficulties of a new manufacture, to employ travellers, and advertise extensively, in order to bring the invention into general notice, to make a great outlay in order to establish the new manufacture, merely as an example for others to follow, or sometimes a greater outlay in order to get it established on a large scale, so as to admit of a subdivision of labor, and the perfection of it in all its parts. Now without the encouragement of a patent, how is any man to engage in a novel and expensive process, if the moment he succeeds, at the cost of all this outlay, he must be sure that his neighbors, who were cautious enough to shun all chances of loss, will come into competition with him, and make the remuneration of all this outlay impossible ? A landlord, possessing a farm that could not be made productive, till after the lapse of years, with continued cultivation and much outlay, will never get it rented without granting a lease ; and unless he makes such a grant, or undertakes the labor and expense himself, the farm will remain for ever unproductive. Quite similar is the policy of granting patents, which may be considered leases for the cultivation of unprofitable farms, of manufactures, granted partly to reward the merit of invention, and partly to remunerate the cost attending the introduction of the improvement, and its early and unprofitable cultivation. By so granting patents, the country may hope, at the

end of their term, to possess the new manufacture in a profitable form ; whereas, by refusing patents, or withholding from them adequate protection, it will either not possess the inventions, or, if it do possess them, it will be in the form of unapplied and barren suggestions. Give the husbandman security that he may sit 'under his own vine, and his own fig tree,' and the magic of that security will raise the vine and the fig tree, where else would be the barren wilderness. Watt, it has been said, spent six whole years in bringing his invention into a good working state. The late Lord Norton, of Leith, the inventor of the patent slip, as a substitute for dry docks, lost the same time, before his patent became profitable to him, although he brought the invention early into use. A like loss of time prior to the invention becoming productive, appears from inquiry, to be an almost constant occurrence in important inventions. Here is the authority of Mr. Farey, in the report" of the committee of the House of Commons, on the subject of patents, in May, 1833, "for saying, that the expense of making the first steam engine on the plan of Watt, was such as no maker could have been remunerated for, by any subsequent outfit he could make, without the aid of what occurred from the patent, or some other extraneous source. And indeed, but for the security which Watt erroneously conceived the patent law to afford, there is little doubt that the invention might at this day have been sneeringly re-

corded by some author, styling himself practical, as a suggestion 'exceedingly ingenious in theory, but altogether useless in practice.'"[7]

The principles and motives of patent laws, then, are, 1, the securing to the inventor the remuneration of his outlay; 2, a reward for his ingenuity, and the benefit he confers on the community; and 3, to encourage and stimulate invention and improvements.[8]

The invention of lithographic printing by Senefelder has been instanced in illustration of the labors and difficulties of an invention, and the influence of motives in stimulating the inventive faculties. He was the son of an actor, and had himself written a play, which, however, he was too poor to get printed. To overcome this obstacle he conceived the bold idea of inventing a cheaper mode of printing than with types. "Nor was the success less wonderful than the attempt. Not by any chance, not by

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[7] Westminster Review, No. 43. January, 1835. p. 94. Foster's Am. Edition.

[8] Per Story J. Lowell v. Lewis, 1 Mason R. 182. See Holt's N. P. C. 58. n. Though monopolies, in the eye of the law, are odious, says Lord C. J. Eyre, in the case of Boulton v. Bull, 2 H. B. 500, 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. But Lord Kenyon says, "I confess I am not one of those who greatly favor patents; for though in many instances, and particularly in this, the public are benefited by them, yet on striking the balance upon this subject, I think that great oppression is practised on inferior mechanics by those who are more opulent." 8 T. R. 98. This is quite an extrajudicial reason.

a first lucky hit, but by contrivance, by experiment, by perseverance amid disappointment, and by knowledge extended from failures, he succeeded in accomplishing this daring effort of his genius, and discovering an art which, if it cannot vie with other ways of printing for extensive utility, will yet, for inventive merit, and with reference to the hopelessness of the rude but simple materials whereby it is worked, ever be ranked among the most wonderful of human inventions."[9]

The grounds and motives of this species of legislation being, then, in the first place, to indemnify inventors, in the second to secure to the public the benefit of invention, and stimulate ingenious minds to make improvements, and, in the third place, to reward the inventors as public benefactors, according to the importance of their inventions, it follows that the earlier or later disclosure of the secret, and the investing of the public with the benefits of the discovery, are essential conditions of the grant of protection and reward. It is, as M. Renouard says, an *exchange* between the two parties, the inventor on one side, who grants the community a new art or machine, and the community on the other, which grants in return to the inventor, indemnity and compensation. But as the publicity of the invention is a matter of public

[9] Westminster Review, No. 43, for January 1835.

interest more especially, it may be dispensed with by an act of special legislation, a right to which is reserved by the government, to be used, when, from fear of benefiting a public enemy or a foreign competitor in the market, the advantages are supposed to be on the side of secrecy;[10] though this latter ground is now mostly abandoned, and the former is, at the most, but occasional and temporary.

CHAPTER III.

Different Kinds of Encouragement to the Arts.

The inventor, then, having a just claim to remuneration and reward, we come next to the question what kinds of remuneration and reward are practicable and suitable. And in this respect the community is not necessarily restricted to the granting to the inventor a preference in the enjoyment of the advantages of the use of his invention. Rewards in money have in many instances been promised before hand, or awarded subsequently, for discoveries. The divine honors, paid by the Greeks and other ancient

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[10] Renouard, c. 7. s. 2. p. 276. Ed. of 1825.

nations to those who were public benefactors by their useful discoveries, originated in the principle upon which modern patent laws are founded, though the kind of reward bestowed in the two cases is different. In some instances the inventor cannot be rewarded directly out of the fruits of his invention. This is the case with many discoveries in science. Were any philosopher to discover a certain and easy method of squaring the circle, he could not be rewarded by a grant of a monopoly of the advantage, if it consisted in mere calculation. The British government offered a reward for an improvement in the mode of ascertaining the longitude. Public grants have been made to Mr. Babbage in consideration of the utility of his calculating machine. Many other instances might be enumerated in which a monopoly of the invention was not considered a practicable or a suitable or an adequate compensation to the inventor. The French government, accordingly, by a law of 1791,[1] provided for the annual distribution of 300,000 livres to artists for labors and discoveries in the useful arts, no part of which is to be given for improvements for which patents are taken out. But this species of reward is liable to much abuse by imposition on the officers of the government to whom the decision on claims is committed, and also by partiality and favor-

[1] Renouard, p. 453.

itism on their part in assigning the reward. A writer, already cited,[2] instances the 5000 guineas paid to Dr. Smith for the "discovery of nitric fumigation to prevent the communication of contagion," and says, were the reward to be granted now, "when time and experience enable the public to estimate the value of the nostrum, five pence might be considered a reward somewhat above its value.[3]

In the great mass of instances of useful improvements, however, a temporary monopoly is not only the most appropriate reward, since it is the direct fruit of the improvement, and the most equitable, since it is graduated according to its utility, in the public estimation ; and the most convenient, since, as M. Renouard justly remarks, the inventor is saved from the mistakes, favoritism and prejudices of censors, and the public from being imposed upon by charletans and pretenders. This system has accordingly been adopted throughout the civilized world as the most suitable general mode of rewarding improvements in the useful arts ; not excluding other modes, however, in special cases.

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[2] Westminster Rev. January, 1835, No. 43.

[3] M. Renouard considers the subject of encouragement of inventions by rewards, and states the objections to it very fully, c. 2, s. 3, p. 42. He does not oppose this mode of encouragement on the general objection to all bounties as interfering with the freedom of industry and checking competition, since this ground of objection is as inconsistent with patent laws themselves, as it is with other modes of encouragement.

The writer in the Westminster Review, already cited,[4] mentions a third mode of encouraging improvements in the arts adopted in some countries, by the establishment of professorships for the purpose. Where a regular routine of duties is to be performed that are within the grasp of minds not endowed with any extraordinary power, or transported by enthusiasm, professorships may be very usefully instituted. So salaries, as well as other incitements, may be held out as rewards for inventions, as well as for excellence in the practice of any art, or the knowledge of any science. The appointment of Poet-Laureate in England is of this description. So provision may be made by the public in many cases for defraying the expense of a course of experiments in some particular branch of industry or science, and, in fact, a large part of the magnificent discoveries in science, by which modern times have been illustrated, have been the fruits of such public provisions. But it is not practicable to carry this system of encouragement to all the infinitude of useful and ornamental arts by which the condition of men is ameliorated, and civilized society adorned. A stimulus must be applied, and a helping hand held out to genius in the lowest walks of life, in the work-shops and in the fields. The encouragement should be

[4] No. 43, January, 1835.

proffered freely, so as to be attainable without solicitation, and without the intervention of influence, power, and great names, so that genius may work its way in solitude, borne forward only by the impulse of its own enthusiasm. For this purpose a limited monopoly, a temporary enjoyment of all the advantages of a discovery, is not only the most appropriate, but by far the most effectual encouragement in a great majority of improvements in the useful arts.

That the monopoly should be only temporary is quite obvious, for it would be wrong to shut out all others from the advantages of a discovery of an improvement for all time in favor of the first discoverer. This would be more objectionable than the doctrine of territorial dominion in right of discovery. It would be a wrong to the community at large. It would, besides, be highly prejudicial and even dangerous to the general interest, to lock up the useful arts that may minister to the necessities and well-being of the great mass of society in a few hands. All laws of this description, therefore, give only a temporary monopoly. They offer a compromise between the inventor and the rest of the community, by which each party surrenders something, and it is proposed that each shall receive an equivalent.

CHAPTER IV.

Legislation on Patent Rights in Great Britain, France, and the United States.

Sec. I.—British Legislation.

Patent Rights are a surviving branch of the great system of monopolies which formerly covered almost all the mechanical arts, and many branches of foreign trade, in modern Europe down to the middle of the seventeenth century, remnants of which, in other instances than patent laws, still lurk in several countries, to this day. Before that period, indeed, the whole frame of civil society, from the rights of the sovereign down to those of the day-laborer, was an entire system of exclusive privileges, that is, of monopolies. The sovereign executive administration in a state was the monopoly of one family, while its subdivisions and subordinate offices were parcelled out among other families. The, legislative sovereignty was in like manner monopolized by a single family or shared among several, to them and their

heirs respectively. And so on of the magistracies, commands, jurisdictions, trades, and pursuits of almost every description. The genius of monopoly predominated in every department of legislation, administration, and of industry, excepting agriculture and pastoral pursuits. The legislators were political monopolists, and their legislation, by direct grants, or by the recognition and protection of privileges arrogated by individuals, companies, or classes, in accordance with the principles of their system, converted the rest of the community into monopolists.

Such was the origin of patent rights; but it would be foreign to our present purpose to go into a survey of monopolies in general. The point of time at which we commence is when legislation began the suppression of other monopolies, for then patent rights began to be specific subjects of legislation. The statute of 21 James I. c. 3, (1623,) while it abolished monopolies generally, made an exception of existing letters patents and grants of privilege for the term of "one and twenty years or under, of the sole working or making of any manner of new manufacture within this realm, to the first and true inventor or inventors, so they be not contrary to the law or mischievous to the state, or generally inconvenient," and also an exception of future grants of letters patent for the term of fourteen years or under; and still further an exception of any grant, privilege, power, or authority theretofore granted, allowed, or confirm-

ed, by act of parliament, then in force, and so long as the same should remain in force. And this provision constitutes the whole legislation on patent rights by the British parliament, except private acts respecting particular patents, down to the year 1835, when the act of 5 and 6 William IV. c. 83, was passed, by which it is provided, among other things, that the patentee may enter a disclaimer of any part of his specification, s. 1. If a verdict or decree shall pass for patentee on the merits in any suit, the judge may grant a certificate, which being given in evidence in any other suit, shall entitle the patentee, on a verdict in his favor in any other suit, to triple costs. s. 3. A penalty of 50£ is incurred by using the mark of a patentee. s. 7. These acts constitute the whole of the British legislation on this subject.

From the time of the passage of the first of the above acts, monopolies have been considered to be subjects of legislative control and regulation. In a case before Lord Hardwicke, in 1742, on an application for an injunction against the use of a stamp on goods, the exclusive right of using which was obtained by the applicant under a charter of Charles I., the Lord Chancellor refused the injunction, saying that the rule the court had governed itself by, was, whether there was any act of parliament on which the restriction was founded, and that the court would never establish a right of this kind, claimed by a charter only of this kind, unless there had been an

action to try the right.[1] That is, in effect, he would presume the grant by the crown; unless authorized by act of parliament, to be void; this presumption might, however, be rebutted by a judgment at law. The exclusive right to use such a mark would stand on the same ground as before the statute of monopolies where there had been no charter or patent for it. In the 22 Elizabeth an action on the case was brought in the Common Pleas, by a clothier, against another of the same trade, for using the same mark on his cloth, and it was resolved that the action would lie. (*Anonymous*, cited in Popham, 144.) Lord Hardwicke, in commenting on this case, in 2 Atkyns, 485, remarked, that it was not the single act of making use of the mark that was sufficient to maintain the action, but doing it with a fraudulent design, to put off bad cloths by this means, or to draw away customers from the other clothier. And there is no difference between a tradesman's putting up the same sign, and making use of the same mark, with another of the same trade.

Though the inventor has a just title to some of the advantages of his invention, yet courts have been very cautious of recognising any *property* in an invention, independently of a grant by the government. Even when inventors, not intending to dedicate their discoveries to the public, have communicated their

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[1] Blanchard v. Hill, 2 Atk. 485.

secret to others in confidence, who have betrayed that confidence, and endeavored to take advantage of the invention to the prejudice of the inventors, courts of equity have still refused to interfere to restrain the fraud, but have chosen to leave the complainant to his remedy at law against the breach of contract or the fraud of the wrong-doer.[2]

Sec. II.—French Legislation.

The French legislation on this subject has its date in 1791, during the agitation preliminary to the revolution, a century and a half posterior to the English, and contemporaneously with that of the United States, both having borrowed from the English,[3] each adopting, to a greater or less extent, and expressly enacting, the construction which had been put upon the fifth and sixth sections of the English statute, by the English courts. The legislation of the three countries on this subject, therefore, being parallel and similar, and that of one being the model, the leading principles of the law, with some exceptions that will be pointed out, are common to them all. The administration of these laws in each country may accordingly be considered a branch of the same

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[2] Williams v. Williams, 3 Meriv. 157.
[3] Renouard, c. 3. s. 2. p. 136.

system of jurisprudence, and the doctrines and precedents of each are not merely illustrative of the subject in respect to the others, but in some degree mutual authorities. And the French authors and also the American writers and judges have so treated the subject; and English authors have recently begun to look at the American and French legislation and jurisprudence on this as on other branches of law. Both the English and French statutes, together with our own, will be given at length in the Appendix; it will be sufficient, in this place, to give an abstract of each, with some general observations, as introductory to the examination of the jurisprudence on each branch of the subject, since a general view of the whole ground will facilitate our researches in each division.

The French law of the 7th of January 1791,[4] after stating, in the preamble, that an inventor has an indisputable property in his discovery—that from neglect to recognise and protect this species of property in France, many distinguished French artists had emigrated and carried with them into foreign countries their inventions, of which France ought to have reaped the benefit; and finally that all the principles of justice, of public order and national interest, imperiously called upon the government to fix the attention of the French citizens thereafter upon this

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[4] Renouard, p. 423.

species of property,—proceeds to make the following enactments: 1. Every discovery or new invention, in all kinds of industry, is the property of the inventor; and the law guaranties to him the full and entire enjoyment of it according to the mode and for the time thereinafter provided. 2. An improvement shall be considered an invention within the meaning of the law. 3. The person who may introduce a discovery into France from abroad is to enjoy the privilege of an inventor. 4. Every one who wishes to secure to himself the advantage of this species of property must address to the proper department of the government a statement in writing of the kind of invention for which he asks a patent, and furnish an exact specification of its principles, materials to be used, and processes, accompanied by suitable plans, drafts, designs, and models. 5. As to objects of general utility, but simple in execution, and too easy of imitation to be the subjects of commercial speculation under the privileges of a temporary monopoly, and in all cases where the inventor may so choose, he may apply directly to the government for a reward, instead of taking out a patent. 6. To those who may prefer the honor of conferring the benefit of their inventions upon the nation directly, and shall establish, by the prescribed modes, the utility of their inventions, shall be entitled to a recompense .out of the fund destined to the encouragement of industry. 7. The enjoyment of this species of property is assur-

ed by a title or patent. 8. Patents are given for five, ten, or fifteen years. 9. A patent for an imported invention is not to extend beyond the period for which it may be patented in a foreign country. 10. Patents are to be enrolled in a public office. 11. A catalogue of inventions kept in the public office, and also the specifications, shall be open to be consulted by all the citizens; unless the legislature, on application of the inventor, should decree that the specifications may be kept secret, after an examination of them by commissioners appointed by the government, who are to judge and finally determine on their exactness and sufficiency. 12. The patentee may, on giving sufficient security for indemnity, require the seizure of articles made in contravention of his patent, and the party infringing his patent, being convicted, on judgment being given against him, shall, besides the confiscation of the article, pay damages to the patentee according to the importance of the infringement, and also shall forfeit to the benefit of the poor of the district, a sum equal to one fourth part of the damages, not exceeding, however, 3000 livres for the first infringement, and double that sum for a subsequent one. 13. In case the patentee fails in his suit he shall pay costs and damages to the defendant, and also forfeit a fourth part of their amount to the use of the poor, not exceeding 3000 livres. 14. The patentee may use his patent himself, or authorize others to do so, and the patent right shall be considered as personal

property.[5] 15. At the expiration of the privilege the specification shall be published, (unless the legislature otherwise orders,) and the invention become free to all. 16. The specification shall also be published and the invention become free to all others in case of the forfeiture of the patent, which may be incurred, 1st. in case of the patentee's concealing the true method of working; 2d. or having used processes not described in his specification; or, 3d. in case of the invention having been described in a printed and published work; or, 4th. unless the patentee shall, within two years from the granting of the patent, have put his discovery into use; or, 5th. if the patentee, having obtained a patent in France, shall obtain one in a foreign country;[6] and 6th. every assignee of the patent shall be subject to similar obligations and conditions. 17. Existing patents are not annulled, but made subject to this law. 18. The tax on patent rights shall be subsequently determined on.

Such is an outline of the French law on this sub-

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[5] *Propriété mobiliaire*, an expression not precisely equivalent to our expression *personal property*, but in this connexion this English phrase substantially expresses the meaning.

[6] M. Renouard, p. 283, decidedly objects to this provision, and with good reason, since a monopoly of the same thing in other countries would certainly leave the French manufacturers and artists a fairer chance of competition in the markets of third countries, than if the manufacture were free in all foreign countries, and it would in such case be immaterial as to the effect upon the industry of France whether the foreign monopolies were held by the French patentee or any other monopolist.

ject. This law was passed in January; in the months of March, April, and May, following,[7] decrees were passed, designating the officers to whom the granting of patents should be committed, directing the mode of application, the specifications, models, and drawings; that different inventions shall not be joined in the same application, the manner of proceeding when the invention should be ordered by the legislature, to be kept secret; providing for the prolongation of expired patents, for a period not exceeding that for which the legislature is elected; for the payment of the tax, from the proceeds of which, all the expenses attendant on the granting of patents are to be defrayed, and no part of them from the public treasury, that is, if the second instalment of the tax, being due six months after the grant of the patent, shall not be punctually paid, the patent shall be forfeited; the mode of proceeding when the patentee wishes to make some modification of his specification after his patent is granted; that in case of a patent for an improvement on a patented invention, the original inventor shall have no right to use the improvement, nor the inventor of the improvement, any right to use the original invention.[8] A mere change of form or proportions shall not, any more than ornaments, of whatever kind they may be, be ranked as an improvement for which a patent can be claimed.[9] Pa-

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[7] Renouard, p. 414. [8] p. 441.

[9] Law of March 29th, 1791. t. 2. s. 8. Renouard, p. 441.

tents for objects contrary to the laws of the realm, the public safety, or the police regulations, shall be void.[10] The judgment of the court, or of a justice of the peace, on a patent case, shall be executed, notwithstanding an appeal.[11] In case of clashing patents the prior shall prevail.[12] The inventor may form such copartnerships as he may think proper, for putting his invention into operation, but shall not put it into operation by putting it into shares of joint-stock,[13] under penalty of the forfeiture of the patent.[14] Assignments of the whole or a part of the patent right shall be registered. The law also provided a form of patents, of the registry, and prescribed the rate of tax.

In 1798 another project of a law on this subject was presented to the council of Five Hundred, which, however, was not enacted as a law.[15] The subject was at that time much investigated. The commissioners to whom the subject was referred, in February 1798, reported a project of a law, differing materially from that of 1791, an outline of which has been given above. But having considered the subject more maturely, the same commissioners, in August following, reported another project of a law,

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[10] Law of March 29th, 1791. a. 2. s. 5. Renouard, p. 441.
[11] Id. Renouard, p. 441.
[12] Renouard, p. 443.
[13] *Actions.*
[14] Law of March 29, 1791. a. 2. s. 14. Renouard, p. 443.
[15] Renouard, 458.

substantially conformable to that of 1791, and merely supplementary to it. Though this project was not adopted as a law, yet, as it was the fruit of much examination and reflection, the most material suggestions contained in it are worth being noticed, especially as some of them may be adopted as constructions of the French law of 1791, correspond to our act of Congress of 1793. It proposed that the applicant for a patent should add to the specification required by the law of 1791, an explanation of what characterized his invention, and designate what he considered a new part in his invention, or as a new arrangement of parts already known, or as a new application producing a result not before known, and which authorized him to assume the character of an inventor.[16] The project also proposed, that the whole proceeds of the tax on patents should be appropriated to the encouragement of the national industry. It also proposed to alter the law, as to the effect of a prior publication of the invention, by limiting it to a prior publication *in France*, instead of a publication generally, as it stood in the law of 1791, without defining whether a publication in France only, or either in that country or any other, was meant. According to this project, the inventor was not to forfeit his in-

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[16] This is substantially the provision of the act of Congress of 1793. s. 3. Vid. infra p. 39. and Appendix.

vention by not reducing it to use within two years, if he was prevented from so doing by inevitable accident. The other provisions of this proposed law, related to jurisdiction and forms of proceeding, matters that have but little application in the United States.

The result of this attempt at a revision of the law of 1791, is a very strong evidence of the skill and judgment, with which that law was drawn up; for not one of the proposed enactments, unless, perhaps the one concerning the prior description of the invention in some printed work, was very material.

The subsequent legislative provisions are, December, 1798 to order the publication of specifications of expired patents; September 27th, 1800, for inserting in the patent that the government did not guaranty the novelty, merit or utility of the invention; November 25th, 1806, allowing a patent to be put into a joint stock by authorization of the government; and January 25th, 1807, fixing the commencement of the period of the patent at the date of the application for it.

Sec. III.—Legislation of the United States.

The legislation of the United States on this subject, originates in the provision of the Constitution, authorizing Congress "To promote the progress of science and useful arts, by securing for limited times, to authors and inventors the exclusive right of their respective writings and discoveries."[18] A proposition made to empower Congress "to establish public institutions, rewards and immunities, for the promotion of agriculture, commerce and manufactures," was silently abandoned in the convention that framed the Constitution.[19]

The first act of Congress was passed under this clause of the Constitution in 1790, which was superseded and repealed by the act of 1793. Additional acts were passed in 1800, 1819 and 1832. All these acts were repealed by the act of July, 1836, now in force, the substantial provisions of which are as follows. A patent office is attached to

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[18] Const. U. S. a. 1. s. 8. No. 8.

[19] Story's Comm. on Const. v. 3. p. 50; cites Journal of the Convention, 261.

the department of state, the chief officer of which is called the Commissioner of Patents,[20] under whom are four clerks, a competent draftsman, a machinist and a messenger. s. 1. 2. 3. Copies of records, books, papers and drawings under the seal of the office, which is to be in the custody of the commissioner and chief clerk, is evidence in any case to the same effect as the original would be. s. 4.[21] Patents are issued in the name of the United States, under the seal of the office, signed by the secretary of state,[22] and countersigned by the commissioner, and recorded, together with the specifications and drawings, in said office. The patent must contain a short description or title of the invention or discovery, correctly indicating its nature and design, and grant to the applicant, his heirs, executors, administrators or assigns, for a term not exceeding fourteen years, the exclusive right of making, using and vending to others to be used, the invention or discovery, referring to the specification, a copy of which is annexed to the patent. s. 5. Any person or persons[23] having discovered or invented any new and useful art, machine,

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[20] Under act 1793. c. 55. s. 1. superintendence of patents was given to the secretary of state.

[21] Certified copies of patent and specification only made evidence by act of 1793. s. 1.

[22] Formerly signed by the president, stat. 1793. s. 1.

[23] By act of 1793. s. 1. only citizens, by that of 1800. c. 25. s. 1. aliens who had resided in the United States two years. Requisites as to the invention and specification substantially the same as by former acts.

manufacture or composition of matter, or any new and useful improvement on any art, machine, manufacture or composition of matter not known or used by others before his or their invention or discovery thereof, and not at the time of his application for a patent in public use or on sale with his consent or allowance, shall desire to obtain an exclusive property therein, may make application to the commissioner of patents, expressing such desire, and the commissioner may grant a patent therefor. The applicant must deliver a written description of his invention or discovery, and the manner or process of making, constructing, using and compounding it, in such full, clear and exact terms, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound or use the same; and in case of a machine, he must fully explain the principle and the modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions, and particularly point out the part, improvement, or combination, which he claims as his own invention or discovery, and accompany the whole with drawings and written references, where the nature of the case admits of drawings, or with specimens of ingredients or of the composition of matter, sufficient for the purpose of experiment, where the invention or dis-

covery is of a composition of matter, which descriptions and drawings must be signed by the inventor in presence of two witnesses ; and he must furnish a model in all cases which admit of a representation by model, of a convenient size to exhibit advantageously its several parts. He must make oath[24] that he verily believes that he is the original first inventor or discoverer of the art, machine, composition or improvement, and that he does not know or believe that it was ever before known or used ; and of what country he is a citizen. s. 6. The commissioner, unless on examination it shall appear that a prior invention of the thing has been made, or that any part had been before invented or patented, or that a description of the invention had been printed in any publication in this or any foreign country, or that the description is defective, shall issue a patent ; but if the claim appears to be subject to any of those objections, he shall give the applicant notice thereof; he may thereupon withdraw his application and receive back two thirds of the fee paid by him previously, relinquishing his model, if he has deposited one ; or, if he persist in his claim, without making such alteration as to obviate the objections, it may be submitted to a board of three examiners appointed by the secretary of state, one of them

[24] Varied from former acts 1793. s. 3. 1800. s. 1.

skilled in the art or manufacture to which the invention appertains, on the applicant's advancing twenty-five dollars towards their fees, by whose award or that of a majority of them the commissioner is to be governed as to issuing a patent.[25] s. 7. So an application which the commissioner supposes to interfere with another application, or an existing patent, may be referred to the examiners. An applicant is not precluded from taking out a patent by reason of his having taken out one abroad and its having been published within six months preceding his application. The patent may be dated from the time of the filing of the specification and application, if the applicant wishes, not exceeding six months before the issuing, and his specification and application may at his request, in the mean time, be filed secretly in the office, and notice be given him of any interfering applications.[26] s. 8. The applicant, if a citizen, or an alien having resided in the United States for a year preceding his application and made oath of his intention to become a citizen, must, on applying for a patent, pay into the treasury of the United States or one of its banks of deposite, thirty dollars; if a subject of Great Britain, five hundred dollars; if of any other country three

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[25] This provision is new.

[26] New.

hundred dollars. s. 9. In case of the death of the inventor his personal representatives may take out a patent. s. 10. The whole patent, or any share, or the exclusive right for any district,[27] may be assigned by writing to be recorded in the patent office within three months from the time of its execution. s. 11. Any citizen or such resident alien who has made an invention which he desires further time to mature, may file a caveat in the patent office entitling him for one year to notice of any interfering application; but if notice of such application be given him he must specify and file drawings and a model within three months. The specifications and drawings of the subsequent applicant are in such case filed secretly in the office. If on filing the specification the applications appear to the commissioner of patents to interfere with each other, proceedings may be had before a board of examiners as above, but no decision of said board in any case precludes any person from contesting the validity of any patent in any action. s. 12.[28] A patent that is invalid by reason of the specification being defective through inadvertency, mistake or accident, and without any fraudulent or deceptive intention, may be surrendered and a

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[27] New.

[28] Whole section new.

new one taken out in its stead. The patentee may add to his patent any new improvement, by filing a specification of it and having such specification annexed to his patent. s. 13.[29] If the plaintiff recover a verdict in action for an infringement, the court may, at its discretion, increase, not more than treble, it. s. 14.[30] In a suit for an infringement the defendant may plead the general issue and give in evidence any special matter of defence of which notice in writing may have been given to the plaintiff or his attorney thirty days before trial, tending to show that the specification does not contain the whole truth respecting the invention, or that it contains more than is necessary to produce the effect described, which concealment or addition must appear to have been made for the purpose of deceiving the public, or that the patentee was not the original inventor, or that the invention had been described in some public work, anterior to the supposed invention by the patentee ; or had been in public use ; or that it had been on sale with the consent and allowance of the patentee, before his application for a patent ; or that he had unjustly or surreptitiously obtained a patent for the discovery of another person, who was using due diligence in perfecting the same ; or that the patentee, if an alien had neglect-

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[29] Last part new.

[30] Formerly trebled of course, act of 1800. c. 25. s. 3.

ed for the space of eighteen months from the time of granting the patent to put and continue the invention on sale upon reasonable terms. The defendant, if he allege a previous public use, must in his notice state the persons by whom and the places where the invention was so used. The fact of the previous use of the invention abroad is not a defence, if it was not known to the patentee and if it had not been described in some printed work, and had not been patented. If the suit fail on the ground of the specification containing too much, and it appear that the defendant had used the part for which the patentee was entitled to a patent, the court has discretion as to awarding costs. s. 15.[31] In case of interfering patents, or an application which interferes with a patent, the question may be tried, and the commissioner is to be governed by the decision of the court as to issuing a patent.[32] s. 16. The circuit court has original jurisdiction of patents at law as well as in equity. s. 17. A patentee or his assigns may apply to the commissioner for an extension of the period of his patent, on paying a fee of forty dollars; and on such application the commissioner must give notice of such application in a Washington paper and such other principal newspapers as he may think proper, published in the part of the coun-

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[31] Four last provisions new.
[32] New.

try most interested against the application. And the secretary of state, the commissioner of the patent office and the solicitor of the treasury are constituted a board to award on the application, on an account of the profits and expenses on the patent having been exhibited to them, and if they award in favor of the application the patent is to be extended for seven years. But no extension is to be granted after the expiration of the term for which the patent was granted. s. 18.[33] A library is to be attached to the patent office, to which an annual appropriation of fifteen hundred dollars is made. s. 19.[34]

A constitutional question has arisen on this subject, viz. whether a State has still the power of granting monopolies, notwithstanding the provision of the Constitution giving limited power of legislation on patents to Congress, and notwithstanding that Congress has used the power thus conferred, by passing laws in pursuance of it. This question was very much agitated in the State of New York in regard to the exclusive privilege of steam navigation granted, in that state, to Livingston and Fulton. The question is one of great importance, and though that case was decided in the Supreme Court of the United

[33] New.

[34] No provision is made for repeal of a patent on scire facias or motion of defendant in an action for an infringement.

States,[25] yet as the decision turned upon a construction of the acts of Congress relating to trade, the general question as to the authority of the States to grant patents and exclusive privileges, still remains without any judicial determination in the court of paramount jurisdiction on the subject.

In the year 1798, an act was passed by the legislature of New York, by which, after reciting that "whereas it had been suggested to the people of this State, represented in senate and assembly, that Robert R. Livingston *was the possessor of a mode of applying the steam-engine, to propel a boat on new and advantageous principles,*" a grant was made to him of "the sole and exclusive right and privilege of constructing, making, using, employing and navigating, all and every species or kinds of boats, or water craft, which might be urged or impelled through the water, by the force of fire or steam, in all creeks, rivers, bays and waters whatsoever, within the territory and jurisdiction of this State," for the term of twenty years from the passing of the act, provided, that he should, within twelve months, construct a boat of at least twenty tons capacity, to be propelled by steam, the mean progress of which, with and against the ordinary current of the Hudson river, taken together, should not be less than four miles an hour. The efforts of Livingston to accom-

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[25] Gibbons v. Ogden, 9 Wheat. 1.

plish this object were ineffectual, and in 1803, another act was passed, by which the privileges granted to him by the act of 1798, were extended to him, and Robert Fulton, whom Livingston had associated with himself in the enterprise, for twenty years from 1803; and in 1808, these privileges were extended for a still further period of time. It appeared that Livingston and Fulton had succeeded in constructing a boat, possessing the properties required by these acts of the legislature; and that Van Ingen and others, without any license from Livingston and Fulton, had also set in motion on the Hudson, a steam-boat, which was employed in navigating and carrying passengers between the cities of New York and Albany. Livingston and Fulton applied to the court of chancery for an injunction to restrain Van Ingen and others, from using their boat in the navigation of the Hudson. The injunction having been refused by that court, the applicants appealed to the Court of Errors. The respondents contended that the acts of the legislature under which the appellants claimed, were contrary to that clause in the constitution of the United States, vesting in Congress the power "to promote the progress of science and useful arts, by securing for limited times, to authors and inventors, the exclusive right to their respective writings and discoveries." *Thompson J.* said, that "it was an undeniable rule of construction, applicable to the constitution of the United States, that all pow-

ers and rights of sovereignty, possessed and enjoyed by the several States, as independent governments, before the adoption of the constitution, and which are either not expressly or by necessary implication, delegated to the general government, are retained by the States. This was the object intended to be secured by the 10th article of the amendments of the constitution, which declares, that the powers not delegated to the United States by the constitution, nor prohibited by it, to the States, are reserved to the States respectively, or to the people. If then, the grant of the privileges claimed by the appellants, would, before the adoption of the constitution, have been a legitimate exercise of State sovereignty, it would be a strained construction of that instrument, to say such sovereignty has been thereby surrendered by the State. This power is certainly not denied to the States, nor exclusively granted to the union, by *express terms*; and those powers which are exclusive, by necessary implication, must be such as are created by the constitution, and which did not antecedently form a part of State sovereignty, or the objects of which, from their nature, are beyond the reach and control of the State governments. An express prohibition to the States, against the exercise of powers of that description would have been useless and absurd. Thus Congress have power *to borrow money on the credit of the United States.* This is an exclusive power by necessary implication. It is a power

created by the constitution. A prohibition to the States would have been absurd, because this never was, before the adoption of the constitution, within the scope of State power; no State being able to pledge the credit of the United States for the repayment of the money borrowed."

But it is obvious that the mere grant of a power to Congress does not necessarily vest it exclusively in that body. Congress has power to levy and collect taxes. But this does not preclude the States from the exercise of a like power, except so far as they are expressly restrained, in relation to duties on imports and exports. Thus, we see that there are subjects upon which the United States and the individual States must, of necessity, have concurrent jurisdiction; and all the fears and apprehensions of collision in the exercise of these powers, which have been urged in argument, are unfounded. The constitution has guarded against such an event, by providing that the laws of the United States shall be the supreme law of the land, any thing in the constitution of any State to the contrary notwithstanding. In case of collision, therefore, the State laws must yield to the superior authority of the United States.

"The power given to Congress to promote the progress of science and the useful arts, is restricted to the rights of authors and *inventors*; and their rights are only to be secured for a limited time. Whatever power the States had over the subjects

prior to the adoption of the constitution, and which have not been granted to the general government, and which are not within the scope and purview of its authority, must, beyond all possible doubt, be retained by the States. The appellants do not, in the case before us, claim as *inventors*, but only as *professors*, of a mode of applying the steam-engine to propel boats, on new and advantageous principles. The right therefore, claimed by them, as granted by the laws of this State, was beyond the reach of congressional authority.

But if the appellants are considered as inventors, and entitled to a patent, or as having actually obtained one, it cannot operate as an exclusion of all legislative authority and interference, to aid and protect the rights thus obtained under the general government. If the subject matter be within the scope of State jurisdiction, and the power is exercised in harmony with, and in subordination to, the superior powers of Congress, it is beyond all doubt legitimately exercised. If any person should appear claiming under a patent, in hostility to the privilege granted by this State, that would be a paramount right, and must prevail, if set up in a court having jurisdiction of the question.

Kent C. J. said, that the grant to the appellants by the legislature of the State, was not repugnant to the power vested in Congress in relation to copyrights and patents. That power only secures, for a

limited time, to authors and inventors, the exclusive privilege to their writings and discoveries; and, as it is not granted by exclusive words, to the United States, nor prohibited to the individual States, it is a concurrent power, which may be exercised by the States, in a variety of cases, without any infringement of the congressional power. A State cannot take away from an individual his patent right, and render it common to all the citizens. This would contravene the act of Congress, and would be, therefore, unlawful. But if an author or inventor, instead of resorting to the act of Congress, should apply to the legislature of the State, for an exclusive right to his production, I see nothing to hinder the State from granting it, and the operation of the grant would, of course, be confined to the limits of the State. Within our own jurisdiction, it would be complete and perfect. So a patentee, under the act of Congress, may have the time of his monopoly extended by the legislature of any State beyond the term of fourteen or twenty-eight years allowed by that law. Congress may secure, for a limited time, an exclusive right throughout the Union; but there is nothing in the constitution to take away from the States the power to enlarge the privilege within their respective jurisdiction.

Again, the power granted to Congress goes no further than to secure to the author or inventor, a right of property, which, like every other species of

property, must be used and enjoyed within each State, according to the laws of such State. The power of Congress is only to ascertain and define the right of property; it does not extend to regulating the use of it. That must be exclusively of local cognisance. If the author's book or print contains matter injurious to the public morals or peace, or if the inventor's machine, or other production, will have a pernicious effect upon the public health or safety, no doubt a competent authority, remains with the States to restrain the use of the patent right. That species of property must likewise be subject to taxation, and to the payment of debts, as other personal proerty. The national power will be fully satisfied, if the property created by patent be, for the given time, enjoyed and used exclusively, so far as under the policy of the several States the property shall be deemed fit for toleration and use.

It has been the uniform opinion in England, both before and since the statute of James, that imported improvements, no less than original inventions, ought to be encouraged by patents. And can we for a moment suppose that such a power does not exist in the several States? We have seen that it does not belong to Congress, and if it does not reside in the States, it resides no where, and is wholly extinguished. This would be leaving the States in a condition of a singular and contemptible imbecility. The power is important in itself, and may be most benefi-

cially exercised for the encouragement of the arts; and if well and judiciously exerted, it may meliorate the condition of society, by enriching and adorning the country with useful and elegant improvements. This ground is clear of any constitutional difficulty, and renders the argument in favor of the validity of the statutes perfectly conclusive.

The Court of Errors adjudged the exclusive privilege granted by the legislature of the State to the appellants, to be valid, and ordered that a writ of injunction should issue against the respondents. *Livingston* v. *Van Ingen*, 9 Johns. R. 506.

Thus the question rests, as a subject of judicial decision, to the present time, for though the subject of Livingston and Fulton's monopoly was again brought before the Court of Chancery of New York,[26] also before the Supreme Court of Errors of that State,[27] and finally before the Supreme Court of the United States,[28] yet as the decision eventually turned upon the act of Congress regulating the coasting trade, and not upon the general power of the States to grant monopolies—the point decided being that a law of any State contravening the laws of the United States regulating commerce, was, as far as it was inconsistent with those laws of the United States, unconsti-

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[26] Ogden v. Gibbons, 4 Johns. Ch. R. 150.
[27] S. C. 17 Johns. R. 488.
[28] Gibbons v. Ogden. 9 Wheat. 1.

tutional and void—it remains undecided by the tribunal of last resort how far the several States can grant monopolies, or whether they can grant any, consistently with the constitution and laws of the United States.

CHAPTER V.

Character and Spirit of the Jurisprudence upon Patent Rights.

The jurisprudence on patents has been said to constitute the metaphysics of the law. The difficulty of administering and giving a construction to this branch of law, lies, says Mr. Justice Story, "not so much in the general principles, as in the minute and subtle distinctions which occasionally arise in the application of these principles."[1] For instance, the subject of a patent must be new, and useful, and clearly described, for so the law requires. There is not the least difficulty respecting these general doctrines; but when we come to inquire what is new, that is, whether the thing is so similar to, or

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[1] Barrett v. Hall. 1 Mason R. 472.

diverse from, what has already been done or produced, as to be substantially the same, or different, the questions are often of a subtile metaphysical character. The same remark is applicable to the question whether a thing is useful, and a decision on the other of these questions, relating to the sufficiency of the specification, involves a nice analysis of the invention and the description of it by the patentee. It follows, from this character of the jurisprudence on this branch of law, that the beneficial effect of the law depends quite as much upon the principles and spirit with which it is interpreted and administered, as upon the general provisions of the law itself, since it is to no purpose to provide for a temporary monopoly of a thing on condition that it shall be described with greater clearness and precision than the nature of the case admits of, or than can be attained by the skill of those whom the inventor must employ.[2]

If, therefore, the doctrine laid down by Lord Kenyon is to be adopted, the beneficial effect of the law as a reward to inventors, will be defeated. He says, "I confess I am not one of those who greatly favor patents; for though, in many instances, the

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[2] Mr. Arthur Aikin, Secretary to the Society for Encouragement of Arts, in his testimony before the Committee of the House of Commons on this subject, in 1833, thinks that the cases turn upon points of law, because neither the judges nor jury understand the matter practically; and Mr. Newton says the merits rarely come in question. Mr. Farey, another witness, says, the judges are astute in observing flaws. Westm. Rev. No. 44, p. 247. Foster's Am. Ed.

public are benefited by them, yet on striking the balance upon this subject, I think great oppression is practised on inferior mechanics, by those who are more opulent."[3] This is stepping aside a little from the judicial, and assuming the legislative functions, for the favor to be extended to patents is properly a matter to be determined by the law, not by the discretion of the judge, or his opinion as to the effect of the law on inferior mechanics. The operation of the patent law of England to the prejudice of small mechanics, if it in fact exist, is owing, in part, to the very strictness and illiberality of construction, which Lord Kenyon professes to favor, since it tends to render the validity of patents so precarious, that only men of ample fortune can afford to run the hazard of speculating in this species of property; especially since the practice mentioned by Lord Brougham has prevailed, who states that it not unfrequently happens that those who are interested in quashing a patent make up a stock purse, to defray, at the common charge, the expenses of defending those who infringe the patent, against suits by the patentee, who is liable thus to be ruined by the expense of law suits, even though his patent may be adjudged to be valid.[4] The enormous tax and charges upon patentees in

[3] 8. T. R. 98. See also opinion of Dallas J. in Hill v. Thompson, 2 J. B. Moore, 458.

[4] Speech in the House of Lords, June, 1835.

England, have had the same tendency. These two causes have gone far towards defeating the objects of the exception of inventions from the prohibition put upon monopolies in general, by the statute of James I.[5] Lord Chief Justice Abbot, since Lord Tenterden, admits that the patents have been too illiberally construed.[6] And in more recent cases the principles and spirit of the English jurisprudence on this subject, have been much ameliorated and made more conformable to the motives and policy of the patent laws. In a more recent trial, before Mr. Justice Patteson, reported by Mr. Godson, the instructions to the jury breathe the true spirit of the law.

In the United States the jurisprudence on this branch of law has in general been marked by more broad and liberal views. Its leading principles cannot be l tter expressed than in the language used by Mr. Justice Story, in the case of Ames's paper-making machine. He says, " Patents for inventions are not to be treated as mere monopolies, odious in the eyes of the law, and therefore not to be favored, but on the contrary to be construed with the utmost rigor as *strictissimi juris*. The Constitution of the United States, in giving authority to Congress to grant such patents for a limited period, declares the

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[5] See Evidence taken before the Committee of the House of Commons, 1832, Westminster Review, No. 44, April, 1835, on this subject.

[6] The King v. Wheeler. 2 B. & Ald. 345.

object to be to promote the progress of science and the useful arts, an object as truly national and meritorious, and well founded in public policy, as any that can possibly be the object of national protection. Hence it has always been the course of the American courts (as it has latterly been that of the English courts also) to construe these patents fairly and liberally, and not to subject them to any over-nice and critical refinements. The object is to ascertain what, from the fair scope of the words, is the nature and extent of the invention claimed by the party, and when the nature and extent of the claim is apparent, not to fritter away his rights upon formal and subtle objections of a purely technical character."[7]

The writer in the Westminster Review, already quoted, goes into an argument and cites examples, to prove that the illiberal and captious jurisprudence on this branch of law, is owing to the incompetency of the judges to understand the merits of the cases, and a consequent inclination to put the decision upon legal technical points, with which they were more conversant.[8] He does not proceed to the proposal of any remedy, and accordingly the argument and citations stand as merely a charge of incompetence or want of fidelity on the part of the judges; and of these the reader is left to infer the former; the latter being indeed totally destitute of pretence, for no one

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[7] Ames v. Howard, C. C. U. S. Mass. Oct. 1833.

[8] Westm. Rev. No. 44. April, 1835. p. 251, 252. Foster's Am. Ed.

at all acquainted with the history of English jurisprudence for a long series of years, will for a moment think of drawing in question the general integrity and laborious fidelity of the English judges, for in these respects the judges of no country stand above them. Still on this subject it is admitted that at least very many of them have fallen into a narrow and inadequate system of jurisprudence. The fair inference, however, is not, as the writer seems to insinuate, that jurisconsults by profession are not suitable judges in cases of patents. The same objections would lie against professed jurisconsults as advocates, yet no patentee, having a controversy on the subject of his patent, doubts being able to find an advocate capable of understanding his invention. The judges are not less likely to be able to understand the principles of an invention than an advocate. It would evidently be quite impracticable to procure judges or even jurymen, who have actually worked at or practised all the innumerable trades and professions by which civilized society is diversified, nor would it be desirable were it practicable. It is then quite nugatory to object that judges have not practical experience in any trade to which any particular patent relates. It is enough that they understand the law of patents. Were tradesmen to be appointed judges, any one would understand but one trade, when the cases arising on patents relate to a thousand; and then the still stronger objection would be,

that he would not understand the law of that particular trade. The only remedy for the inconvenience mentioned, if it indeed be one, would be the selecting of special juries. This is the conclusion to which the remarks of the writer just referred to, would tend, though he does not state it specifically. Whether this would be expedient it is not the place here to discuss, the only object at present being to show that no amelioration of the jurisprudence on the subject of patents, could be expected from any different mode of constituting the judicial tribunals.

CHAPTER VI.

What Persons are entitled to Patents, and capable of taking them out.

Sec. I.—Mere Introducer of an Art or Machine.

We are next to inquire what party is entitled to a patent for any particular invention, and what persons

in general are permitted to take out patents. And in the first place the patentee must be the inventor. Mr. Godson remarks, that "the character of an inventor may be obtained by a person in three ways, by bringing with him and publishing to his countrymen the productions of the genius of foreigners; by publishing what others as well as himself have found out at home; or by publishing what he himself has discovered."[1] He does not mean that the publisher of another's invention is entitled to a patent for it, but that among several who simultaneously discover the same thing, the first who applies for a patent, and publishes it, is entitled to the monopoly. Two descriptions of persons then are entitled to patents, namely, the inventors of a thing, and the introducers of what others have invented abroad, but which was before unknown in England. The doctrine of the English jurisprudence as to the right of importers of an art or machine, has, as we have seen, been expressly incorporated into the French law.

The law of the United States differs from that of England and France in this particular, by limiting the right to take out a patent, to the *original inventor;* it does not give the privilege to a person who merely introduces a foreign invention. The statute of 1793 gives the privilege to the *inventor*, and requires that he shall make oath that he verily

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[1] Ch. 2. p. 59.

believes that he is the "*true inventor*," which words have been construed not to be applicable to the importer of another's discovery ; though the expressions do not exclude such a claimant in any stronger terms than the English statute of 2 James I., the fifth section of which excepts from the general prohibition of monopolies, those theretofore granted of the "sole working or making of any manner of new manufacture within this realm, to the first and true inventor or inventors." And the sixth section, which provides for the future grant of monopolies, is in precisely the same words in this respect. As it had been customary, before the passage of that act, to grant patents to the first introducers of foreign inventions into England, who were accordingly placed upon the same footing as inventors in respect to this privilege, when the statute made an exception of patents for inventions from the general suppression of monopolies, it was very naturally construed to except those inventions introduced from abroad as well as others, and the words of the sixth section, describing the persons entitled to future grants of patents, being the same as those of the fifth section in relation to the then existing patents, the same construction was given to them. This construction has never been given to the American law of 1793. It is an essential qualification for the claimant for a patent in the United States that he should be the *true inventor*.

Sec. II.—Joint Patentees.

A joint patent cannot be sustained upon a sole invention of either of the patentees, for the patent act gives no right to a patent except to the inventor; and requires an oath from the party who claims a patent, that he is the true inventor.[2] Joint inventors must therefore be joined in the patent.

Sec. III.—Sole Patentee.

If the invention is suggested by another, the person to whom the suggestion is made, though he proceed to reduce it to practice, is not the *inventor* within the meaning of the statute. This proposition might, however, be limited to the case of a suggestion of the specific process or machine. A general theoretical suggestion that a steam vessel might be made to navigate the air or water, or that paper could be made in a continued sheet on a cylinder, would not be such a suggestion of the invention as would preclude the person to whom it should be made, from taking out a patent for a particular process or of specific machinery for effecting the result suggested. But if the specific process is pointed out, the person to whom it is so pointed out, cannot after-

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[2] Barrett v. Hall, 1 Mason, 473. Stearns v. Barrett, 1 Mason, 153.

wards be the inventor of such process or machine. In an action by a patentee, for an infringement of a patent for a bleaching liquor, a chemist deposed, that previously to the grant of the patent, he had had frequent conversations with the patentee, on the means of improving bleaching liquor, and that in one of them, he had suggested to the patentee, that he would probably obtain his end by keeping the lime water constantly agitated ; and it appeared that this was indispensable in the process. Lord Ellenborough thereupon nonsuited the plaintiff, on the ground that it was not his invention.[3] So in an action for an infringement of a patent for an improved method of making hats, a witness, who was one of the plaintiff's men, stated that he invented the improvement which was the subject of the patent, while employed in the workshop of the plaintiff. The plaintiff was thereupon nonsuited.[4] Mr. Justice Bayley throws out the suggestion that if the witness had been employed by the plaintiff for the express purpose of devising improvements, the construction might have been otherwise.[5] This was supposing an assignment of the invention, for it can make no difference in principle whether the consideration paid for the invention, be a specific price or a salary. This would not, how-

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[3] *Tenant's case*, Dav. Patent Cas. 429.
[4] Per Holroyd J. Barber v. Walduck, cited 1 Car & P. 558.
[5] Bloxam v. Elsee, 1 Car. & P. 558. 1 R. & M. 187.

ever, make the employer the *inventor*, though the real inventor would thereby, lose the property in his invention. And this position is illustrated by another case, in which a head colorman, employed to mix colors for calico printing, had, during his service, kept a book in which were entered the processes for mixing the colors, many of which were of his own invention. Mr. Justice Chambre said, the master has a right to something beside the mere manual labor of the servant in the mixing of the colors; and though the servant invents them, yet they are to be used for his master's benefit, and he cannot carry on his trade without his book.[6] And it was held accordingly that on discharging the colorman, his employer was entitled to retain the book and use the mixtures. This case does not give the right of taking out a patent to the employer, but it proceeds upon the doctrine that the inventor, being employed for the purpose of compounding these mixtures, and having entered them in the book, thereby lost his property in them as an invention. The case can, however, hardly be shaped into a general doctrine, it is a matter of construction of the particular circumstances, whether the inventor, by the nature of his employment, or by his contract, either assigns his invention to his employer, or at least divests himself of

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[6] Makepeace v. Jackson, 4 Taunt. 770.

his own property in it. It is not only, not always the case; but, on the contrary, the inventor would most frequently retain his property; for most persons are employed to practise arts already known, not to invent new ones. We must limit the doctrine strictly to the case put by Mr. Justice Bayley, of the employment of a person for the purpose of superintending and directing the processes, and who uses them without reservation for the benefit of his employer.

Sec. IV.—The Original Inventor.

To entitle a party to a patent he must not only be an inventor, but also the *original* inventor; that is, the first inventor who reduces the invention to practice. Though one exception to this rule is illustrated by the case of Dolland's patent for an improvement in reflecting telescopes, for Doctor Hall had first made the invention and reduced it to practice in his closet, and kept it secret, and yet Dolland's patent for the subsequent invention was held to be valid; for he was the original inventor of the improvement to all practical purposes, as far as the public was concerned.[7] Mr. Justice Washington is said to have held, in an action for an infringement of a patent, that it was no defence that the plaintiff was not the original projector of the improvement if the patent was taken

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[7] Dall. Pat. Cas. 170. 2 H. Bl. 469.

out with the knowledge and assent of the original projector, and not in fraud of his right.[8] So the same judge is reported to have intimated, in another case, that where an invention was joint, and it was agreed by two (verbally) to take out a joint patent, and one, in violation of this agreement, took out the patent in his own name separately, he would be the trustee of the other to the amount of his moiety.[9] It is not easy to reconcile this doctrine with the language of the statute requiring the patentee to make oath that he is the *true* inventor; and it seems to conflict with the doctrine laid down by Mr. Justice Story.[10] Certainly if the terms *original projector* be used in their ordinary sense, and such projector communicates his project to another, this latter cannot be considered the original inventor.

The subject of the originality of the invention and also that of simultaneous inventions by different persons independently of each other, will be considered more particularly in treating of the novelty of inventions. It is sufficient to state generally, here, that where an inventor has applied for a patent, his claim will not be superseded by that of any other unless that other can show a previous invention. It will not be enough for him to show a simultaneous invention.

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[8] Dixon v. Mayor, C. C. of U. S. Penn. April, 1821. Coxe's Dig. 532.
[9] Reutgen v. Kanowrs & Grant, 1 Wash. C. C. R. 168.
[10] Stearns v. Barrett, 1 Mason, 153; Barrett v. Hall, 1 Mason, 447.

Sec. V.—Assignee by Assignment anterior to the Patent.

It was ruled by Mr. Justice Washington, in a case for an infringement of a patent, not to be a good defence to prove that another person was the inventor, if it appeared also in evidence that the patent was taken out by the plaintiff with the consent of that other.[11] A short abstract of the point as above stated, is the only report of this case, from which it does not appear whether the point ruled was one merely of evidence, namely, that the consent of the person in question to the plaintiff's taking out the patent, rebutted the testimony that such other was the inventor; or, that another person might take out a patent in his own name for an invention not exclusively his own, with the consent of the real inventor, which would be equivalent to the patent being taken out by the assignee in case of an assignment before the patent is issued. The latter is the more obvious construction of the report as Mr. Coxe gives the case. And this doctrine is countenanced by an intimation of the same judge in another case.[12] So in another case[13] it is implied that the patent was taken

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[11] Dixon v. Mayor, C. C. U. S. Penn. April, 1821. Coxe's Dig. 531.

[12] Reutgen v. Kanowrs & Grant, 1 Wash. C. C. R. 168.

[13] Gray & Osgood v. James and others, 1 Pet. C. C. R. 481, 482.

out by the assignees. But whatever may have been held or intimated or implied to the contrary on this subject, it seems, from the whole language of the act of Congress of 1793, especially the form of the oath, and from the cases already cited,[14] and also from the common form of the patent itself, that it can be taken out only on the application and oath and in the name of the inventor himself, or the inventors themselves, if more than one, except in the case of the death of an inventor, as hereafter mentioned. The effect of an assignment previously to the grant of the patent, therefore, is that on the patent being issued on the application and oath and in the name of the inventor, and on the recording of the assignment in the office of the secretary of state, the assignee, thereafter, under the fourth section of the act of 1793, stands in the place of the original inventor, both as to right and responsibility.

Sec. VI.—Heirs or Representatives of the Patentee.

By the act of April 17th, 1800, it is provided that in case of the decease of the inventor before taking out a patent, his personal representatives may take it out; the oath being "so varied as to be applicable to them."

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[14] Stearns v. Barrett, 1 Mason, 153; and Barrett v. Hall, 1 Mason, 447.

Sec. VII.—Aliens.

By the act of 1793, the party applying for a patent, in order to be entitled to the grant of one, must not only have been the original sole inventor, but must also have been a citizen of the United States. The expression of the first section of that act is "That when any person, or persons, *being a citizen, or citizens of the United States*, shall allege that he or they have invented," &c. the secretary may grant letters patent. This was a departure from the practice under both the English and French laws on the same subject, by both of which patents are granted to foreigners as well as to English and French subjects. The act of Congress of 1790, which was superseded and repealed by that of 1793, like the English and French laws, made no distinction between citizens and foreigners. After the right of taking out a patent had been confined to citizens exclusively for seven years, the act of Congress of April 17th, 1800, was passed, by which the privilege was extended to *resident* aliens. By that act the privileges granted to citizens by the former "are extended and given to all aliens, who at the time of petitioning, in the manner prescribed by said act, shall have resided for two years within the United States; provided that every person petitioning for a patent for any

invention, art, or discovery, pursuant to this act, shall make oath, or affirmation, before such patent shall be granted, that such invention, art, or discovery, hath not, to the best of his knowledge or belief, been known or used either in this or any other foreign country." This form of the oath differs from that taken by a citizen, but the difference is only in form, for both are "placed substantia ly on the same ground. In either case if the invention was known or used before it was patented, the patent is void. In both cases the right must be tested by the same rule."[15]

Sec. VIII.—Personal Disabilities.

A bankrupt is not disqualified from taking out a patent during the pendency of the proceedings in bankruptcy, though M. Renouard[16] says that by the French law the patent, if taken out before his discharge, the profits of it will enure to his creditors. The law is not so in England; there no acquisition subsequent to the assignment of the bankrupt's effects by the commissioners of bankruptcy, will go to the benefit of his creditors under the assignment. A patent bearing date before the assignment by the commissioners will pass by such assignment. The

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[15] Per M'Lean, J. Shaw v. Cooper, 7 Pet. R. S. C. Rep. 292.
[16] P. 312. c. 8. s. 2.

construction of the State bankrupt laws in the United States, in regard to this question, would probably be similar to that adopted in England, as far as the proceedings are analogous to those under the English law.

M. Renouard[17] says that persons civilly dead, that is, who have abjured, or who, by way of punishment, have been deprived of the rights of civil society, may, notwithstanding such disability, apply for and take out a patent; though they could not pursue any person for infringing it, or otherwise derive any benefit from contracts made respecting the use of it. But the opinion of M. Renouard as to their capacity to take out patents, seems to be subject to some doubt, since he assumes that such persons are by the laws of France incapable of contracting, or asserting rights of property. It should seem to follow that they could not receive valid grants, and if so, they cannot be patentees, since a patentee is a grantee, and a party to a contract. But in forming an opinion on this question, we should bear in mind that the phrase *civilly dead* does not, in all countries and in all cases, import precisely the same disabilities. If the laws of any country be that a person civilly dead cannot take and hold any property, but that all his posscssions go to his heirs, by the very fact of his civil disability, and his estate is administered upon as

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[17] P. 311, c. 8. s. 2.

that of a person deceased, his right to a patent would stand upon the same footing; and his representatives would take it out in his stead where the invention was made before his disability was incurred. But if he makes the invention subsequently to his disability being incurred, there does not appear to be any way for him to avail himself of the advantages of it unless the act of Congress authorizing the granting of patents should be construed to supersede the State law by which he should be declared to be civilly dead. These questions remain as subjects of future legislation or judicial decision.

Sec. IX.—Minors.

Nothing prevents a patent being taken out by a minor or married woman; though in the latter case the property in the patent would belong, as a matter of course, to the husband. But in the former case it does not appear but that the fruits of the minor's invention merely, independently of his labor, would be similar to his finding a treasure not claimed by any owner, or to his inheriting property by descent. In the last case, what descends to him is his separate property, and from analogy it is inferred that in the two former cases his rights would be the same.

CHAPTER VII.

Subjects of Patents.

Sect. I.—Kinds of Subjects Patentable.

We are now brought to a very difficult branch of the law of patents, the inquiry being as to what *kinds* of new inventions are patentable. Nothing is patent-

able but an *invention;* but not every invention is so. After the adoption of the French patent law, patents were taken out for systems of finance;[1] but these were declared not to be within the class of inventions comprehended under the law. To decide this question, our first resort is to the words of the law; or in the British statute, the *word;* for the kinds of subjects intended by that law, are expressed by the single word *manufacture;* and, as we shall see, the meaning and extent of this word, in reference to the subject in hand, is restricted, in the first place, by express provisions in the law, and then again by construction, and yet a very extensive signification is given to it. The act of Congress of 1793 gives a more full and definite description of patentable subjects; the words are, "any new and useful *art, machine, manufacture, or composition of matter.*" This law is intended to express more fully and precisely, the practical construction which had already been given to the fifth and sixth sections of the British act of monopolies, and is thus at the same time, the law of the United States, and an exposition of that of England. The language of the French law is, perhaps, broader than either that of the English or American law, the expression in that law being, "every invention or discovery in any kind of

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[1] Renouard.

industry;" which, taken in its full extent, comprehends things not embraced by the language of either the English or American law, taken in its widest construction, though the words of these laws, taken in their broadest signification, include subjects which cannot be brought within the French law; or, at least, this is the case with the American law, for the words *art* and *machine*, may be applied to things not included under discoveries or inventions in industry. The truth is, that the practical construction, given to the three laws, in regard to the kinds of invention that are patentable, is substantially the same.

If we take all these expressions in connexion, we shall obtain a pretty accurate, general notion of the kinds of subjects intended by each of these laws, for the subject of the patent must, by the language of the French law, be an invention or discovery in industry; but under the construction given to that law, not *every* invention or discovery in industry is patentable; then the word *manufacture* points out the species of discovery or invention intended to be protected; but lest this word, though by a liberal construction it is applicable to all the proper and all the intended objects of encouragement by the law, should receive too narrow an interpretation, the act of Congress adds what in fact amounts to a liberal construction of the word manufacture, by expressly extending the act to any art, machine, or composition of matter. But it will be evident that we must accept the ex-

pressions *art*, and *composition of matter*, in this case, with large restrictions, since the word *art* is applied to mere skill, and yet it will appear very obviously that any discovery in the mode of managing the hands or limbs, or the instrument used, such as is comprehended under the expressions skill, or address, as in horsemanship, in steering a ship, or playing on a musical instrument, cannot be made the subject of monopoly, and if it could be, that any such monopoly would be most pernicious. We must then resort to *manufacture*, and in the English law, and our own, to limit the construction to be put upon the other expressions used in our law.

In examining more particularly the kinds of subjects covered by the law of patents, it is difficult to distinguish and arrange them into different classes, under the various expressions which have been used to designate them, since these expressions are all of very various, and not very definite signification, and, besides, the subject has been perplexed, by a loose use of these expressions in the opinions of courts in patent cases, and also by the use of the same expression in different senses. The discussions on this subject in the cases, afford a striking illustration of the remark already cited, that we are occupied with a branch of jurisprudence which may aptly be denominated the metaphysics of the law; since, in the subtile and nice distinctions often requisite, and still oftener attempted than requisite,

language fails to supply adequate and precise phraseology, so that we are without the usual help to satisfactory speculation, that is, clear language, intelligible to every one, which proves, in this, as in other cases, a double hindrance, first to clear and discriminating thinking, and second, to the ready and perspicuous communication of thought. As the different expressions used in describing patentable subjects are very analogous to each other in signification, and are mutually blended and implicated together in their meaning, and in the application made of them in the cases, the most convenient mode of treating of them, at least the most concise, will be to enumerate them all, and examine them successively, without confining ourselves rigidly to that order, to do which, much repetition would be requisite, without rendering the subject any clearer.

The expressions by which patentable subjects have been defined and described, then, are, first, those used in the laws already enumerated, viz. invention, discovery, manufacture, art, machine, composition of matter, and others used in the cases, viz. a method, principle, application of a principle, process, effect, result, product, device, combination.

Sec. II.—Manufacture.

The term most discussed in the English reports, as descriptive of the kinds of subjects for which patents may be granted, is the description given in the

statute of 21 James I., and also one of the descriptions in the act of Congress of 1793, namely, *manufacture*. The subject was much discussed in the cases arising on Watt's patent for an improvement in the steam engine. In one of these cases, Lord Chief Justice Eyre thus explains this term. He says that the exposition of the Statute of 21 James I. c. 3, as far as usage will expound it, has gone very much beyond the letter. In 2 Salkeld, 447, 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.[2]

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[2] Boulton v. Bull, 2. H. Bl. 481.

In the same case, Mr. Justice Heath gives the following exposition of this term: "What are *new manufactures* within the scope of the proviso of the statute 21 Jac. 1? Such 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."[3]

Lord Kenyon, in one of the same class of cases, defines the word according to its etymology; considering it to be something made by the hands of man.[4]

In a subsequent case we find the same term thus explained by Lord Chief Justice Abbott: "The word 'manufacture,' in the statute 21 Jac. 1. c. 3, has been generally understood to denote either a thing made, which is useful for its own sake, and vendible as such, as a medicine, a stove, a telescope, and many others, or to mean an engine, or instru-

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[3] Boulton v. Bull, 2. H. Bl. 492.
[4] Hornblower v. Boulton, 8. T. R. 99.

ment, or some part of an engine or instrument, to be employed either in the making of some previously known article, or in some other useful purpose, as a stocking-frame, or a steam engine for raising water from mines. Or it may *perhaps extend* also to a new process to be carried on by known implements, or elements, acting upon known substances, and ultimately producing some other known substance, but producing it in a cheaper, or more expeditious manner, or of a better and more useful kind."[5]

Lord Ellenborough gives the following description of what is a *manufacture* within the statute. "In every invention through the medium of mechanism, there are some materials which are common, and cannot be supposed to be appropriated in the terms of any patent. There are common elementary materials to work with in machinery; but it is the adaptation of those materials to the execution of any particular purpose, that constitutes the invention; and if the application of them be new; if the combination in its nature be essentially new; if it be productive of a new end, and beneficial to the public, it is that species of invention, which, protected by the King's patent, ought to continue to the person the sole right of vending it."[6]

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[5] The King v. Wheeler, 2 B. & Ald. 349.
[6] Huddart v. Grimshaw, Dav. Pat. Cas. 278.

"The true foundation of all patents," says Mr. Justice Buller, "must be the *manufacture* itself; and so says the statute 21 Jac. 1 c. 3. 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."[7] So Mr. Justice Story says, "It is of no consequence whether the thing be simple, or complicated; whether it be by accident, or by long, laborious thought, or by an instantaneous flash of mind, that it is first done. The law looks to the fact, and not to the process, by which it is accomplished. It gives the first inventor or discoverer of the thing, the exclusive right, and asks nothing as to the mode or extent of the application of his genius to conceive or execute it."[8]

The expression in the French law on this subject, is not, as we have seen, precisely equivalent to that of the English statute, or rather, the terms are not those of which the word *manufacture* would be a literal translation, and yet the construction put upon their law is very similar. Accordingly, M. Renouard's description of patentable subjects will answer very well as an exposition of the English act of 21 James I. or the act of Congress of 1793, on this subject. He says, "It is not every kind of inven-

[7] Boulton v. Bull, 2 H. Bl. 486.
[8] Earle v. Sawyer, 4 Mason, 6.

tion and discovery that is the subject of a patent right. It is necessary that the invention or discovery should be of a nature to afford products that may be fabricated by the hands of man, or by the labor which he directs, or which may be subjects of commerce by sale and purchase. If, for instance, a philosopher discovers and makes known a property of heat, before unknown, and yet draws from his discovery no special and positive application to specific fabrications, his discovery is merely scientific, and not patentable. But if, on the contrary, he avails himself of the scientific principles, for the production or combination of a new substance, for the formation of an instrument or machine, if he employs it to obtain a result that is new and of a vendible description, whatever it may be, he may take out a valid patent."[9]

Sec. III.—Method.

Having given a definition of the word manufacture by the use of the other expressions, already enumerated, the judges and the writers proceed to analyze those other expressions, and make the necessary distinctions, qualifications, and exceptions. The words *method* and process are often used in these definitions of manufactures, and also in giving titles to patents,

[9] Renouard, c. 5. s. 1. p. 165, 166.

as a *new method* of effecting such or such an object, or a new *process*. Mr. Godson[10] thinks a method or process is not patentable, but the reason of his being of this opinion, is, that he puts a peculiar meaning upon the terms. He says, "When an invention is not of a thing made, it can only be known by being taught by the inventor himself, or by being learnt from *experiments* made on the faith of the description given of it in the specification. With that assistance, however well the method or process may be set forth, some time and experience must necessarily be required, before a person can make use of the invention so beneficially as the discoverer. But the public are not bound to make experiments, and, therefore, it seems reasonable to infer that a mere process or method cannot be the subject of a patent."

"But supposing it possible that a new method of operating with the hand, or a new process to be carried on by known implements or elements, might be so described as to be, by bare inspection, made as beneficial to the public, as to the discoverer; that neither time nor labor, skill nor experience, are required to put it in practice; still it is not a substance or thing made by the hands of man; it is not vendible; which is an inherent, primary quality of a new manufacture."

[10] Patents, p. 85.

"The advantages of a method or process, in truth, arise from the skill with which it is performed. Suppose, for instance, that one person can with a certain machine, produce a particular article of dress, of a certain quality; and another, with the same machine, by using it in a different manner, can make the same article in half the time, and reduce it to half the price; however new and ingenious this method may be, still it is nothing substantial or corporeal. But suppose that in thus using the machine, some *apparently* inconsiderable alteration is made, that would be sufficient to support a patent; and it is indeed difficult to imagine, that any beneficial effect could be produced without some *material alteration* in the instrument itself; and then why not oblige the inventor to take out a patent for the improvement? It is expressly enacted in the statute of 21 James I. that the new manufacture must not be "hurtful to trade, nor generally inconvenient." To monopolize such methods as above enumerated, appears to be particularly hurtful to trade. In every branch of it there are workmen who use the machines employed in their respective trades more skilfully than their fellows. This superior skill may be in consequence of a particular method of applying their implements. But it would be carrying the doctrine to a great length, to decide that the workmen are entitled to patents for their respective methods of working."

"And further, every master is bound to teach his

apprentice the best way, or means within his knowledge of following his trade. If, therefore, a master obtained a patent for fourteen years, for a particular *method of operating with known instruments*, to produce a known article in less time than usual, or of making it better and more useful, such apprentice would not be allowed to exercise his hands in the most skilful manner he was able, until several years after he had commenced business for himself. Such a patent would, indeed, be "generally inconvenient." There would be a monopoly in every handicraft trade; one person only in each calling would be allowed to work in the most skilful manner."

"For these reasons—that Dr. Hartley's case is the only one in support of the doctrine, and he did not first make iron, nor first discover the effect of iron on fire, so that he was not the inventor of any substance or *instrument*—that a method does not possess the qualities which have been shown to be inherent in the *subjects* of patents, and can be known only by making experiments, and that it is inconvenient to the public, particularly to masters and apprentices; that methods should be monopolized; it might perhaps be fairly inferred, that a method or process is not a new manufacture, within the meaning of the statute of monopolies."

The inference from all this reasoning is, that some methods or processes are not patentable; but it will appear in the sequel very satisfactorily, that others

are so; and it would be very singular, if they were not so, that the very word *method* should be so often used in the title of inventions; and Mr. Godson himself recommends the use of this term;[11] and yet, as we shall see, under the English statute, the title must truly describe the invention, or the patent is void. We can say, then, that a method in general, merely *as such*, is not patentable, or, in other words, that methods are not, universally, and without exception, subjects of patents. And the cases will illustrate what methods are, and what are not patentable.

"This expression, *new manufacture*," says a writer,[12] "may have either of two significations. A stocking was a new manufacture the first time one was knit; but a stocking was again a new manufacture the first time one was made by a loom. In the first case, the thing made was new; in the other, the art of making that thing in a particular way. Accordingly in these two senses, the reader will find the word *manufacture* set down in Johnson's dictionary, and Webster's. This well known, double signification of the word, has, however, often most unaccountably been overlooked. Some judges, in ill accordance with other terms of the act they interpret,[13] have insisted that a new manufacture behoves to be a new salable

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[11] Patents, p. 88.

[12] Westminster Review, No. 44, April, 1835, p. 247, Foster's Am. Ed.

[13] 21 Jac. 1. c. 3.

thing made; and they will not admit a new method to be a new manufacture, except when that method, as in the stocking-loom, happens to be a new piece of mechanism, itself an article of sale; but when the new method constitutes only a new process, then, however valuable that process may be in manufactures, and however difficult and meritorious to discover, they will not regard it as a manufacture, and consequently not as a proper subject for a patent." In illustration of this remark, the writer refers to the case of Watt's patent, which was endangered by the doubt on the part of the judges, whether he had made what could be considered in law, an improvement "in any manner of *manufacture*."

This doubt arose from Mr. Watt's having used the word *method* in the title of his invention, his patent being for a *method* of lessening the consumption of fuel and steam in the use of steam engines, a doubt being entertained by some of the judges whether a *method* was patentable. The use of this word by Mr. Watt, in his title, endangered the validity of his patent, whereas, had he called it an improvement, the doubt could not have arisen, and yet the sense would have been the same. But it will appear very satisfactorily that a method may be the subject of a patent, the doubt in this respect being, as already suggested, not whether a method may be patented, but in what sense this term is applicable to patentable subjects.

In one of the cases on Watt's patent, Mr. Justice

Heath defines in what sense a method is an invention within the statute, where he describes it to be a principle reduced to practice.[14] So Mr. Justice Buller, in the same case, says that a method must be reduced to practice, in order to support a patent. He says, "the mere application or mode of using a thing was admitted not to be a sufficient ground for a patent; 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 that 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."[15] And Mr. Justice Grose makes the same distinction.[16] And so Mr. Justice Rooke, in one of the same series of cases,[17] speaking of Watt's specification, said, as to those parts of the specification which denoted intention only, and did not state the thing to which it was to be applied, he did not think the patentee could maintain an action for a breach of them. That is, whether the question relates to an invention, a discovery, a manufacture, method, process, or principle, it must

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[14] Boulton v. Bull, 2 H. Bl. 481.
[15] Boulton v. Bull, 2 H. Bl. 486.
[16] Hornblower v. Boulton, 8 T. R. 102.
[17] Boulton v. Bull, 2 H. Bl. 479.

be a thing actually and practically carried into effect. Mr. Justice Eyre very clearly explains the same distinction. In Watt's case a patent was granted for a *new invented method* of lessening the consumption of steam and fuel in steam-engines. *Eyre* J. C. "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 the 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."[16]

The same judge thus further illustrates this subject: He says, "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 of a 'method for securing buildings from fire,' is no substance or composition of things; it is a mere negative quality, the

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[18] Boulton v. Bull, 2. H. Bl. 495.

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, produced the effect; for those are things in common use. But the invention consisted 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. 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 manner of *using*, or I would rather say, of *disposing a thing in common use*, and which thing every man might make at his pleasure. 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 evident 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 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 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,[19] "it must be *for method detached from all physical existence whatever.*"[20]

The same judge proceeds to point out a distinc-

[19] 4 Burr. 2397.

[20] H. Bl. 493

tion, which is of great importance, and which serves as a clew to clear up some of the obscurity that hangs over the cases on this subject. He says, "When the object 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 Dolland'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."[21] There certainly is a plain distinction between an invention of a new composition, as a medicine, and a new process, art, or method, since in the former case, there may be nothing new in the process or mode of proceeding in compounding or manufacturing the substance, in the latter the mode of proceeding to construct the machine or instrument to which the patent relates, may be the only thing invented. Hence, in discussing this subject, judges and writers sometimes

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[21] 3 H. Bl. 402.

having in view one class of these causes, say, that the substance only is the subject of the patent; at other times, having in view the other class of cases, they say that a method may be patentable. Now according to the explanation of Lord Chief Justice Eyre, both these propositions are true to a certain extent, but neither is true to the extent laid down in some of the cases, that is, we cannot say that substances alone are patentable, nor that methods only are so. Accordingly Mr. Grose, in one of the Watt and Boulton cases, says it signified nothing to the inventor or the public, whether the patent be for the engine made or the method of making it. Indeed, to the purposes of a title to a patent or a specification, judges have considered the words method and engine to be synonymous. "Engine and method mean the same thing," says Mr. Justice Lawrence, "and may be the subject of a patent. Method, properly speaking, is only placing several things and performing several operations, in the most convenient order; but it may signify a contrivance or device, so may an engine; and therefore I think it may answer the word *method*."[92] And Abbott C. J. says on the same subject, "When a person applies to the crown for a patent for a new engine or instrument, he may represent himself to

[92] Hornblower v. Boulton, 8 T. R. 103.

be the inventor of a new method of accomplishing that object, which is to be accomplished by his engine or instrument."[23] That a method or mode of operating may be the subject of a patent, is plain from this, that when the object of two patents or effect to be produced is substantially the same, they may both be valid, if the modes of attaining the desired effect are essentially different.[24] Therefore where judges or writers lay down the general doctrine that a method cannot be the subject of a patent, as Mr. Justice Heath does in the above case of Boulton v. Bull,[25] the proposition is true in such a restricted sense as on the whole to render it erroneous.

Sec. IV.—Process.

The word process has been suggested instead of method, as descriptive of the subject of a patent, and what has been said of *method* is, in many cases, applicable to *process*, the difference between the two terms, as applied to this subject, being, that method is of a wider signification. Thus Abbott C. J. says, "The word *manufactures*, in the statute Jac. 1. c. 3, *may*, *perhaps*, extend to a *new process*, to be carried

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[23] King v. Wheeler, 2 B. & Ald. 350.
[24] Huddart v. Grimshaw. Dav. Pat. Cas. 290.
[25] 2 H. Bl. 483.

on by known implements, or elements, acting upon known substances, and ultimately producing some other known substance; but producing it in a cheaper or more expeditious manner, or of a better and more useful kind."[26]

It is true the Chief Justice speaks with great caution, because he was using a mere illustration, in doing which, he did not choose thus collaterally to express a positive doctrine, upon a question which might be a subject of much subtile discussion, but he distinctly implies his own opinion. He seems, however, to have been over-cautious, for if a method may be patentable, of which it is apprehended there can be no doubt, then, of consequence, a *process*, which in this application of the term is, in many respects, synonymous with method, may be so also; *may* be so, for in respect to this latter, we must speak with the same qualifications, and subject to the same exceptions, as when we use the term *method*, as descriptive of the subjects of patents.

Sec. V.—Principle.

The question whether a *principle* is a subject of monopoly under the patent laws, was much discussed in the cases relating to Watt's specification of his

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[26] King v. Wheeler, 2. B. & Ald. 349.

improvement in the steam-engine. In that specification, the patentee stated that his invention "consisted in the following *principles*," and then proceeded to describe particularly the construction of the engine according to his improvement. This gave occasion to numerous, elaborate, and subtile discussions on the patentable character of a *principle*. Had Watt described his invention as consisting of the "following particulars," all this disquisition would have been lost, and yet this would have been substantially equivalent to the phraseology he did use, for after stating that his invention consisted of *principles*, he proceeded to define and explain what he meant by that expression, and it was not objected that his description was at all defective. The real question then was, whether Mr. Watt had used the word *principle* in a wrong sense, and, if so, whether his patent was defeated for this philological inaccuracy, which to all practical purposes was not of the slightest importance, since any person could understand the construction of his machine, and any mechanic could construct another after his description, as well as if he had committed no such inaccuracy. And the strife was a very doubtful one, and the patent would have been lost, had not the judges, on the final decision of the cause, been very strongly disposed to maintain it on account of the great merit and utility of the invention. We will proceed to a review of those discussions, which are useful in throwing

light on the question, what are patentable subjects, though the case which gave rise to this term does not, in this respect, seem to have been one of any well-grounded doubt.

"It is a clear position of law," says Mr. Justice Heath, "that the organization of a machine may be the subject of a patent, *but principles cannot.* 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."[27] "The very statement of what a principle is," says Mr. Justice Buller, "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. If the principle alone be the foundation of this 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 on 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, yet

[27] Boulton v. Bull, 2 H. Bl. 482, 483.

the patent must by void *ab initio*."[28] "Undoubtedly," said Eyre C. J. "there can be no patent for a mere principle."[29] Lord Keyon said, "the principal objection made to this patent, is that it is a patent for a philosophical principle only, neither organized nor capable of being organized." If the objection were well founded in fact, it would be decisive; but I do not think that it is so.[30] "I am inclined," said Mr. Justice Grose, "to think that a patent cannot be granted for a mere principle."[31] Mr. Justice Lawrence said, "if it were necessary to consider whether or not mere abstract principles are the subject of a patent, I should feel great difficulty in deciding that they are."[32]

Such are the opinions of the judges on the patentable character of *principles*. But what meaning did they attach to the word? Mr. Justice Lawrence says, "a principle may mean a mere elementary truth, but it may also mean constituent parts."[33] Mr. Justice Rooke thus explains the word. "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

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[28] Boulton v. Bull, 2 H. Bl. 485.
[29] S. C. Ibid. 495.
[30] Hornblower v. Boulton, 8 T. R. 98.
[31] S. C. Ibid. 104.
[32] S. C. Ibid. 105.
[33] S. C. Ibid. 107.

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."[34]

The signification in which a *principle* is not a subject of a patent is distinctly pointed out by Abbott C. J. He says, "No merely philosophical or abstract principle can answer to the word *manufactures*. Something of a corporeal and substantial nature, something that can be made by man from the matters subjected to his art and skill, or at the least some new mode of employing practically his art and skill, is requisite to satisfy this word."[35]

Mr. Justice Story remarks, upon the use of this term as descriptive of the subjects of patents, that "In the minds of some men, a *principle* means an elementary truth or power; so that in the view of such men, all machines, which perform their appropriate functions by motion, in whatever way produced, are alike in principle, since motion is the element employed. No one, however, in the least acquainted with law, would for a moment contend, that a principle in this sense, is the subject of a patent;

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[34] Boulton v. Bull, 2 H. Bl. 478.
[35] King v. Wheeler, 2 B. & Ald. 350.

and if it were otherwise, it would put an end to all patents for all machines which employed motion, for this has been known as a principle, or elementary power, from the beginning of time. The true legal meaning of the principle of a machine with reference to the patent act, is the peculiar structure or constituent parts of such machine. And in this view the question may be very properly asked, in cases of doubt or complexity, of skilful persons, whether the principles of two machines be the same or different? Now the principles of two machines may be the same, although the form or proportions may be different. They may substantially employ the same power in the same way, though the external mechanism be apparently different. On the other hand, the principles of two machines may be very different, although their external structure may have great similarity in many respects. It would be exceedingly difficult to contend, that a machine, which raised water by a lever, was the same in principle with a machine, which raised it by a screw, a pulley, or a wedge, whatever in other respects might be the similarity of the apparatus."[36] "By the principles of a machine," says the same judge, in another case, "is meant the *modus operandi*, the peculiar device or manner of producing any given effect. If the same effects are produced by two machines by the same

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[36] Barrett v. Hall, 1 Mason, 470.

mode of operation, the principles of each are the same. If the same effects are produced, but by combinations of machinery operating substantially in a different manner, the principles are different."[37]

Sec. VI.—Application of a Principle.

Another word often used in connexion with principle, and with other words, in defining the subjects of patent rights, is *application*. The two questions in this case are, first, whether, though a principle in any sense may not be patentable, the *application* of

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[37] Whittemore v. Cutter, 1 Gallison, 478. The writer in the Westminster Review, No. 44, April, 1835, says, on this subject, "There is another word, which, in patent causes, is used as a rival word to *manufacture*, but still more ambiguous in its meaning, and which, recommended by such ambiguity, is in very frequent requisition. The word is *principle*. To make this law-fantom, the witchcraft used by the lawyers consists in mingling three different meanings together, used by the aid of certain professional solemnities, producing a mystical word, capable of harlequinizing an idea into many various forms." The writer should have said, the *word* is *harlequinized*, not any idea; and his own expression seems to be quite as mystical as any thing to be found in the arguments of the lawyers, or the opinions of the judges, whom he probably intends to include in the class of lawyers. The mystery is nothing more or less than the common fallacy in reasoning, of accepting and applying an ambiguous proposition that is true in one sense, and false in another sense, in the erroneous sense. This may be done in respect to *manufacture, method, process, or principle*, since each of them is, in some senses, patentable, in others, not so; and, therefore, whether we say that each of them is or is not patentable, the proposition will be true or false, according to the sense in which the words are used and applied.

that principle may be so? and second, whether a manufacture, method, or principle in certain senses, being patentable in their character, any new application of such manufacture, method, process or principle, is the substantive subject of a valid patent? In answering the general question, whether a new application of either of these is a proper subject of a patent, we have not only to distinguish whether the thing to be applied may, or cannot be, itself the subject of a patent, but we have the additional uncertainty of meaning and ambiguity in the use of the word *application*. If by *application* be meant the *mode of operating*, or the mechanical combinations, means, or instruments, by which a principle or theory is carried into operation, in this sense, the new application of a theory or principle, may be the subject of a patent. The whole circle of inventions for which patents have been granted, consists of new applications (in this sense of the term) of the mechanical powers and chemical properties of matter. But if by new *application* be meant only the new *use* of a thing, requiring no new apparatus or instrument, and involving no invention whatever, such for instance as using a nail machine for making copper nails, which had been patented, or had before been used only for making iron nails, in this sense a new application cannot be patented. The proposition may then be laid down that a new application of a theory or principle, or of an art, process, or machine,

is itself patentable in its character, may be the subject of a patent where such application is an invention—where it is effected by new means, instruments, or machinery, or new improvements of those already in use.

Thus Mr. Justice Johnson says, "the legal title to a patent consists not in a principle merely, but in an application of a principle, whether previously in existence or not, to some new and useful purpose."[38] He intends the case of an application effected by new apparatus, machinery, or instruments, or processes; such an application as requires invention. In this sense, Mr. Justice Buller says, the new application of the effect of water in changing colors, may be the subject of a new patent, when applied in a new manner, and by new processes, to a species of manufacture to which it had not been before applied. He illustrates this in the case of the invention of water-tabbies, which "owed its rise to the accident of a man's spitting on a floor cloth, which changed its color; from which he reasoned on the effect of intermixing water with oils or colors, 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 colors, no man could have had a patent for any distinct manufacture, produced on the same principle. Suppose painted floor cloths

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[38] Whitney v. Carter, Fessenden's Pat. 130.

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."[39]

So where the shearing of cloth from list to list by means of shears, was known, and the shearing it from end to end by rotary cutters was also known, it was held that a machine constructed so as to shear from list to list by means of rotary cutters, was such an invention as would entitle its author to a valid patent.[40] This was not a mere use of the rotary cutter for another purpose, but some contrivance and machinery must have been necessary in order to move the cloth under the cutter transversely, other than that necessary to move it lengthwise, and it was this contrivance or machinery, which was the foundation of the patent.

A known mode of operating or process of manufacture, merely applied to new objects, has never been held to be patentable. Thus the Court of King's Bench held that a new application to the manufacture of one kind of anchors, of a mode of manufacture before practised in some other kinds, could not be a subject of a valid patent.[41] They assumed

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[39] 2 H. Bl. 488. [40] Lewis v. Davis, 3 Car. & P. 502.
[41] Brunton v. Hawkes, 4 B. & Ald. 540.

no doubt that this mode of manufacturing an anchor was entirely obvious to any workman who had been conversant with the use of the same mode, in other instances, and, that no material change or contrivance, invention or discovery, was necessary in order to manufacture an anchor in this way—that is, it was substantially the same process. Mr. Justice Heath suggests that it is doubtful whether a new application of a machine is patentable. And he might for the same reason extend the query to the case of a new application of a method or process. He says, "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."[42] He implies that a patent for the application of a new principle to an old machine is not a good subject of a patent. But whether it will be so or not, will depend on the considerations which have been stated already. There certainly is no such dilemma as Mr. Justice Heath seems to suppose; for if it be admitted that a machine may be patented, it does not follow

[42] Boulton v. Bull, 2. H. Bl. 481.

that a patent for the application of a principle is therefore void. On the contrary, we have seen that such a patent may be valid.

The true distinction on this subject is clearly pointed out by Mr. Justice Story, who says, "To entitle a party to a patent for a whole machine, it must in substance be a new machine; that is, it must be a new mode, method, or application of mechanism, to produce some new effect, or to produce an old effect in a new way."[43] But a mere naked application of what is known to a new purpose, without any new apparatus, means, or instruments, is not patentable. Mr. Justice Buller says, "Suppose the world were better informed than it is, how to prepare Doctor 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 Doctor 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 medicine would be new, and the effect of it as materially different from what is now known, as life is from death."[44] So the same judge instanced in the same case the new use of arsenic for the cure of agues, in illustration of the doctrine that a mere new applica-

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[43] Woodcock v. Parker, 1 Gallison, 438.
[44] Boulton v. Bull, 2 H. Bl. 487.

tion of a known thing was not a foundation of a patent.[45]

The original inventor of an application of a power or principle, though he may at the same time discover the power or principle, cannot take out a patent for its general application. He is limited to what he has effected. Thus Mr. Justice Heath says, in the cases of Watt and Boulton, on the improvement in the steam-engine, that a patent could not be claimed for the power of steam; it can be claimed only for a particular application of that power, effected by new modes and by new means or processes. "The Marquis of Worcester discovered 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 for 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 position of law respecting patents for

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[45] A new application of machinery already known, is said, by M. Renouard, (p. 175. 459.) to be a patentable subject in France.

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."[46]

Mr. Justice Washington instructed the jury that the use and application of bells to fire engines to give alarm of fire, so as to be rung by the motion of the carriage, was the subject of a patent. He also considered the application of steam-engines to the purposes of propelling boats to be the subject of a patent.[47]

Sec. VII.—Effect. Result. Product.

There is a very close analogy between a new application and a new effect or result of what is already known, as in the instances given by Mr. Justice Buller, of the use of James's fever powder for the cure of a consumption;[48] this might be called either a new *application* or a new *effect* of the invention. The

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[46] Boulton v. Bull, 2 H. Bl. 482.
[47] Park v. Little and Wood, 3 Wash. C. C. R. 196.
[48] 2 H. Bl. 487.

same remarks that have been made concerning a new application, in this sense of the term, are equally true of a new effect. There is no instance in which it has been held that a mere new effect of the use of a machine already known, without any new combination, machinery, or process, is the subject of a valid patent. The doctrine is laid down by Mr. Justice Story, that "a patent can, in no case, be for an *effect only*, but for an effect produced in a given manner, or by a peculiar operation. For instance, no patent can be obtained for the admeasurement of time, or the expansive operations of steam; but only for a new mode, or new application of machinery, to produce these effects; and therefore, if new effects are produced by an old machine in its unaltered state, I apprehend that no patent can be legally supported; for it is a patent for an effect only."[49] In this case as in that of a new application, there must be something new in the method, process, combination, or composition, in order to lay the foundation of a patent.

Sec. VIII.—Art, Scientific Axiom, Theory, Abstract Proposition. Reduction of the Invention to Practice.

The act of Congress, in describing the subjects of patents, uses the term *art*, which, if taken in its

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[49] Whittemore v. Cutter, 1 Gallison, 478.

broadest sense, is, like all the others we have been considering, much too comprehensive, but it serves very well to show what is not a proper subject of monopoly, in contrast with *science*. A science is not the subject of a patent, and for the same reason, a mere theory, scientific axiom, or principle, or abstract proposition, or truth is not so.[50] All the abstract philosophical truths that have been discovered, are free from the patent laws, as are the general powers and qualities of matter. The claim of the inventor arises only on the practical application of a theory, or abstract truth, or elementary property, in some art, process, or method, which he has invented and put in practice, or some machine or apparatus, or composition of matter, which he has actually made.

A merely intended invention, or improvement, is not patentable. Mr. Watt, in his specification, suggested his intention to add certain improvements to his steam-engine. Mr. Justice Rooke said "That as to the articles of the specification which denote intention only, I do not think that the patentee can maintain an action for the breach of them; for he cannot anticipate the protection, before he is entitled to it by practical accomplishment."[51]

The subject of a patent must be something that has been reduced to practice; it is not enough that it is merely practicable or possible; it must be

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[50] Lowell v. Lewis, 1 Mason's R. 187 [51] 2 H. Bl. 479.

something which has been actually done or produced. Mr. Justice Buller remarks, of the cases cited in that of Boulton v. Bull,[52] "that none of them go the length of proving that the method of doing a thing without the thing being done or actually reduced to practice, is a good foundation for a patent. When the thing is done or produced, then it becomes the subject of a patent." "The thing to be patented," says Mr. Justice Story, "is not a mere elementary principle, or intellectual discovery, but a principle put in practice, and applied to some art, machine, manufacture, or composition of matter."[53] This is the doctrine of all the cases. It is laid down by Mr. Justice Buller, in the cases on Watt's improvement of the steam-engine, "that though an idea or a principle alone would not support a patent, yet that an idea reduced into practice, or a practical application of a principle, is a good foundation for a patent. 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." So Mr. Justice Eyre says, in the same case, "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,

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[52] 2 H. Bl. 487.
[53] Earl v. Sawyer, 4 Mason 1.

or manual occupation, I think there may be a patent. Now this is the thing for which the patent stated in this case was granted, and this is what the specification 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.*"[54]

In a more recent case in England, on an invention of carriage-wheels, by which the load was made to bear upon the top of the circumference of the wheel, instead of the centre, Mr. Justice Paterson said that the patentee was entitled to a patent for the suspension *principle* carried into effect in the particular *way* described by the patentee."[55]

The patent being for an invention that is described in it, it is not only requisite that the invention should be reduced to practice, but it must be reduced to practice in the way, and produce the effect specified.[56] In an action brought for an infringement of a patent for "a hammer on an improved construction for the locks of all kinds of fowling-pieces and

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[54] Boulton v. Bull, 2 H. Bl. 486, 495.

[55] Jones v. Pearce, Gods. Sup. 16.

[56] Bloxam v. Elsee, 6 Barn. & Cress. 169. See also Turner v. Winter, 1 T. R. 602, 606, 607.

small arms," the improvement was stated in the specification to consist in letting out the air from the barrel, and causing a communication between the powder in the pan and the powder in the barrel, without, at the same time letting out the powder, by means of an air-hole in the lock. It appeared by experiments made in court, that the powder would pass through the hole in the patented lock by its own gravity, without the least difficulty. The Lord Chief Baron. "It seems to me, that the utility of this invention, and the purpose of this patent, wholly fail; for the purpose of the hole, as described in the specification, is to let the air pass through, and at the same time secure the powder from passing through; that of itself would be an answer to this action."[57]

The law is the same in this respect, in France, as in England and the United States. M. Renouard[58] says that a mere experiment, without a successful result, is not sufficient ground of a patent; to entitle a party to which, he must succeed in producing a result or effect.

Sec. IX.—Materials, Substances, Compositions of Matter.

The use of the ordinary known materials cannot

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[57] Manton v. Parker, Dav. Patent Cas. 327. [58] p. 282.

be monopolized by patent.[59] We must understand this doctrine to be limited to known materials, and to such as naturally exist, whether known or not, for the discovery of a new elementary substance or material, by analysis or otherwise, does not give a right of a monopoly of it.

Our statute provides for granting a patent right of a new composition of matter. This expression has reference to medicines, and compositions used in the arts. The same subjects are covered under the English statutes under the general term *manufactures*. In these instances the composition itself is usually considered to be the subject of the patent, and not the mode or process of compounding,[60] but both the composition and the mode of compounding may be considered to be included in the invention, where the compound is new, since in that case the mode or process of compounding must also be so, though it may consist merely in observing the proportions assumed by the inventor, which being given, the composition may be made in many instances by any person without previous instruction or practice. And in this case it will be immaterial whether the inventor has the monopoly of the compounding or the composition, since the monopoly of either, will, in effect, include both. The expressions, *composition*

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[59] Per. Buller J. Boulton v. Bull, 2 H. Bl. 487.
[60] 2 H. Bl. 483. 487.

of matter, usually applied to mixtures and chemical compositions. It is no objection to a patent for a composition, that all the ingredients were known and in use; it is enough that the compound is new. And this composition may be merely the imitation of some natural composition or mixture; for a new method, by invented processes and apparatus, of producing a composition of matter, which is sometimes, or in some places, to be met with as a natural production, is as much the subject of a patent, as a new machine to produce a known and old effect.

Sec. X.—Combination.

A combination, as the subject of a patent, is analogous to a composition of matter, the former expression being usually applied to mechanical inventions as the latter is to chemical. It is sufficient also, in this case, that the combination is new, though the separate things combined may have been before in use and well known.[61] Where a patent is for a *new combination* of existing machinery or machines, and does not claim or specify any improvement or invention, except the *combination*, proof that the machines or any part of their structure existed before, forms no objection to the patent, unless the *combination* has

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[61] Bovill v. Moore, Dav. Pat. Cas. 361.

existed before, for the reason that the inventor is limited to the combination.[62]

Sec. XI.—Improvement.

The act of Congress of 1793 expressly recognises the right to a patent for an improvement on a machine, by the provision in the second section, "that any person who shall have discovered an improvement in the principle of any machine, or in the process of any composition of matter, which shall have been patented, and shall obtain a patent for such improvement, shall not be at liberty to make, use, or vend the original discovery; nor shall the first inventor be at liberty to use the improvement." The French law has a similar provision, and both merely adopt the construction which had before been put upon the statute of monopolies by the English courts. Lord Coke mentions an early case against this construction. He says, "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; and so was it resolved in the Exchequer Chamber, Pasch. 15 Eliz. in Bircot's case, for a privilege concerning the preparing

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[62] Per Story J., Moody v. Fiske, 2 Mason, 112; and see also opinion of Abbott C. J., Brunton v. Hawkes, 4 B. & Ald. 541, and of Lord Eldon, Hill v. Thompson, 3 Meriv. 630.

and melting, &c. of lead ore ; for there it was said, that that was to put but a new button to an old coat; and it is much easier to add than to invent. And there it was also resolved, that if the new manufacture be substantially invented according to law, yet no old manufacture in use before can be prohibited."[63] But the doctrine of Bircot's case was early abandoned. Mr. Justice Buller says that, "In Morris v. Branson, tried at the sittings after Easter term, 1776, the patent was for making eyelet-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 stocking-frame. Lord Mansfield said, "after one of the former trials on this patent, I 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 could be a patent for an addition only. I paid great attention to it, and mentioned it to all the judges. If the general point in 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 was ever granted." There was a verdict for the plaintiff, with 500*l*. damages, and no motion was made in arrest of judgment. Though his Lordship did not mention what were the opinions of

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[63] 3 Inst. 184.

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.[64]

Mr. Justice Grose makes a similar remark upon the same case. He says, "A doubt is entertained whether there can be a patent for an addition to an old manufacture. This doubt rests altogether upon Bircot's case, 3 Inst. 184; and if that were to be considered as law at this day, it would set aside many patents for very ingenious inventions, in cases where the additions to manufactures before existing, are much more valuable than the original manufactures themselves. If indeed a patent could not be granted for an addition, it would be depriving the public of one of the best benefits of the statute of James. Lord Coke's opinion seems to have been formed without due consideration, and modern experience shows that it is not well founded.[65] And so Mr. Justice Eyre says Bircot's case is not law.[66]

The cases on Watt's patent brought this question directly before the courts, for his invention was professedly an *improvement* on the steam-engine. In one of those cases which came before the Exchequer

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[64] 2 H. Bl. 489.
[65] 8 T. R. 104.
[66] Boulton v. Bull, 2 H. Bl. 491.

Chamber in 1795, Mr. Justice Buller said, "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 but 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 favor of the patent for the improvement, and the parties have acquiesced, where the objection might have been brought directly before the court."[67]

The preceding cases have been cited rather to show the course of the jurisprudence on this subject, and the grounds on which an addition or improvement was held to be patentable under the English statute

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[67] 2 H. Bl. 489.

of monopolies, than for the purpose of establishing the point that it is so, of which there can be no doubt, since, as we have seen, the act of Congress expressly recognises the right to such a patent.

In regard to improvements, two material questions arise: 1. Whether a thing is new, or the *improvement* merely of what was known before; and 2. Where the alleged invention is described to be an improvement merely, whether it is a substantial material improvement, or only a change in form.

On the first of these questions Mr. Justice Story says, "it is difficult to define the exact cases, when the whole machine may be deemed a new invention, and when only an improvement of an old machine; the cases often approach very near to each other. In the present improved state of machinery, it is almost impracticable not to employ the same elements of motion, and in some particulars, the same manner of operation, to produce any new effect. Wheels, with their known modes of operation, and known combinations, must be of very extensive employment in a great variety of new machines; and if they could not, in the new invention, be included in the patent, no patent could exist for a whole machine embracing such mechanical powers." "Where a specific machine already exists, producing certain effects, if a mere addition is made to such machine, *to produce the same effects* in a better manner, a patent cannot be taken for the whole machine, but for the improve-

ment only. The case of a watch is a familiar instance. The inventor of the patent lever, without doubt, added a very useful improvement to it; but his right to a patent could not be more extensive than his invention. The patent could not cover the whole machine as improved, but barely the actual improvement. The same illustration might be drawn from the steam-engine, so much improved by Messrs. Boulton and Watt. In like manner if to an old machine, some new combinations be added, to produce new effects, the right to a patent is limited to the new combinations."

"On the other hand, if *well known effects* are produced by machinery in all its combinations *entirely new*, a patent may be claimed for the whole machine."

"So if the principles of the machine are new, either to produce a new or an old effect, the inventor may well entitle himself to the exclusive right of the whole machine. By the principles of a machine (as these words are used in the statute) is not meant the original elementary principles of motion, which philosophy and science have discovered, but the *modus operandi*, the peculiar device or manner of producing any given effect. The expansive power of steam and the mechanical power of wheels, have been understood for many ages; yet a machine may well employ either the one or the other, and yet be so entirely new, in its mode of applying these elements, as to entitle the party to a patent for his whole com-

bination. The intrinsic difficulty is to ascertain, in complicated cases, the exact boundaries between what was known and used before, and what is new, in the *mode of operation*"[68]

An eminent jurist remarks that "in the present improved state of the arts, it is often a question of intrinsic difficulty, especially in cases of the invention of minute additions to complicated machinery, to decide whether one machine operates upon the same principle as another, and whether that which is stated to be an improvement, be really new and useful." And he proceeds to suggest, upon the authority of the above decisions of Mr. Justice Story, that, in determining whether a machine is an improvement upon those already known, or substantially the same, "the material point of inquiry is, not whether the same elements of motion, and, in some particulars, the same manner of operation, and the same component parts are used, but whether the given effect be produced substantially by the same mode of operation, and the same combination of powers in both machines."[69]

Here we observe that the criterions proposed are, first the diversity of effect; second, the diversity of method. Mr. Justice Story, in one of the cases cited above, proposes the combination of these two circum-

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[68] Whittemore v. Cutter, 1 Gallison, 478. See also opinion of Mr. Justice Story in Odiorne v. Winkley, 2 Gall. 51.

[69] Kent's Com. Vol. 2, p. 370, 2d edit. Lect. 36.

stances as a criterion. But his meaning doubtless is that these are characteristic of an improvement constituting an invention which may serve to distinguish it where other characteristic distinctions are wanting; and Chancellor Kent would not probably be understood to lay down a different doctrine. The use of different elements of motion, or different mechanical principles or combinations offer equally marked grounds of discrimination, which are no less to be resorted to, than the method of operating and the result. Indeed the result or effect can scarcely be considered a criterion, for this by itself is not, as we have seen, patentable. In order to distinguish whether an alleged invention is patentable as such, and not merely a slight, immaterial, formal variety of what was already known, whether patented or not, we must look, not at a part merely, but at all of the characteristics of a patentable invention, the elements, principles, method or mode of operation, and according as we find these, originally, more or less combined in the alleged improvement, it will appear proportionably more or less satisfactorily to constitute the basis of a patent.

The following case in the Court of King's Bench, in England, illustrates what may be considered as amounting to a patentable improvement. A patent was granted for an improvement in the manufacturing of chain cables. The improvement was alleged to consist in so applying the link to the force to operate

on it, that that force should operate in one place, namely at the end; and this was effected by having a broad-ended bar across, instead of a conical one, which broad-ended bar lapped round the link, instead of perforating it; the former bars weakened the link, and they were weak in themselves, and if broken, there would be a pressure in some other part. The links were to have circular ends, and sides nearly parallel, but bulging out towards the middle. Abbott, C. J. "As at present advised, I am inclined to think that the combination of a link of this particular form, with the stay of the form used by the patentee, although the form of the link might have been known before, is so far new and beneficial as to sustain a patent." Bayley, J. was of the same opinion.[70] In this case a link of the same form had been before in use, and it had been strengthened by a bar across it, but a change of the form of this bar, and the manner of attaching it to the link, was considered, and as it should seem with very good reason, by Chief Justice Abbott and Mr. Justice Bayley, to be a good foundation for a patent. The case went off, however, upon other grounds.

The provision of the act of Congress that the party making an improvement should not be entitled thereby to use the original machine, if it was subject to a

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[70] Brunton v. Hawkes, 4 B. and Ald. 540.

patent right, is introduced merely for the purpose of excluding any inference that the granting of a patent for an addition impaired the right of the original patentee. There would, however, have been very slight grounds for any such pretence, had the clause not been introduced, since the fact of granting a monopoly necessarily excludes others from the use of the article without the permission of the patentee during the existence of the exclusive privilege.[71]

Sec. XII.—Change of Form, Proportions, or Materials. Insufficiency of the Invention. Ornaments.

The second section of the act of Congress of 1793, which authorizes a patent for an improvement, declares "that simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery." This construction would undoubtedly have been put upon the law without any such express exception. It is indeed but the branch of a more general rule in giving a construction to the law, namely, that any change or modification of a machine or other patentable subject, which would be obvious to every person acquainted with the use of it, and which makes

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[71] See Fox, ex parte, 1 Ves. & B. 67.

no material alteration in the mode and principles of its operation, and by which no material addition is made, is not a ground for claiming a patent. To permit a formal, trivial change in an article to be patentable, or a reconstruction of it upon substantially the same principles, with unimportant differences in form or proportions, would defeat the beneficial operation of the statute and in effect repeal it. In considering the subject of the infringement of patents, we shall see more distinctly the construction put upon the statute in this respect, and it will appear that the courts carry out the motives and reasons of this exception in deciding what is an infringement, and what improvements are the subjects of a distinct patent.

The principle of this provision of the statute is as applicable to most alleged new inventions as to professed improvements or patented machines, since almost every invention is an alleged improvement, either on what has been patented, or what has been practised without ever having been subject to a patent, and as soon as a patented art or machine has become free by the expiration of the patent, it stands upon the same ground as any art or machine which has been in free public use time out of mind. To authorize a patent in either case, there must be, not merely a formal, trivial variation, but a distinguishable, substantial difference.

In a case in the English Court of Chancery, Mr.

Bell, one of the counsel, justly remarked that "it was not necessary to show that an invention was the result of long application or deep skill. He remembered that many years ago ladies wore flowered tabbies. The method of working the flowers was discovered by mere accident; a man having spit upon the floor, placed his hot iron on it, and observed that it spread out into a kind of flower. He afterwards tried the experiment upon linen, and found it produced the same effect. He then obtained a patent, and lived to make a considerable fortune."[72]

The sufficiency of the invention depends not upon the labor, skill, study, or expense applied or bestowed upon it, but upon its being diverse and distinguishable from what is familiar and well known, and also substantially and materially, not slightly and trivially so. This requisite of an invention is sometimes expressed to be a difference in principle.

"What constitutes a difference in principle between two machines, is frequently a question of difficulty, more especially if the difference in principle is considerable, and the machinery complicated. But we think it may safely be laid down as a general rule, that where the machines are substantially the same, and operate in the same manner, to produce the same result, they must be in principle the same.

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[72] Walker v. Congreve, 29 Rep. of Arts, 2d Series, Vol. 29, p. 311.

I say *substantially*, in order to exclude all formal differences, and when I speak of the same result, I must be understood as meaning the same kind of result, though it may differ in extent. So that the result is the same according to this definition, whether the one produce more nails, for instance, in a given space of time, than the other, if the operation is to make nails."[73]

A patent for an improvement in dressing woollen cloth by damping it with steam, instead of wetting it with hot water according to the former practice, was held, by Lord Tenterden, to be void, on the ground that it was not a sufficient change from the former practice to constitute an invention.[74]

Mr. Godson states from manuscript the case of a patent being cancelled on *scire facias*, on the ground of the insufficiency of the invention. A patent had been granted, in 1818, to Hadden, for an improvement in manufacturing woollen cloth by passing the wool between hollow iron rollers heated by putting heaters into them. Lister varied the pro-

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[73] Per. Washington J. Gray and Osgood v. James and others, 1 Pet. C. C. R. 396.

[74] The King v. Fussell, Gods. Sup. 15. 71. The scire facias was instigated by Daniell to repeal Fussell's patent as an infringement of his own. Fussell retaliated by instigating a similar process against Daniell, (the King v. *Daniell*, Gods. Sup. 71.) on the ground that the mode of dressing cloth by using hot water, which was patented by him, was in use by others long before his patent was granted; and both patents were repealed.

cess by heating the rollers by steam, and by passing the wool through hot water to soften it. This was ruled at nisi prius not to be a sufficient improvement upon Hadden's invention, or rather, not be a sufficient variation from it, to constitute an invention, and the patent was on this ground repealed.[75]

The question of the identity or diversity of two manufactures was much discussed in the case already cited on the patent for an improvement in the manufacture of ships' anchors. The specification stated that in place of the common method of joining the two flukes, consisting of distinct pieces of iron, to the shank by welding, which requires the iron to be so frequently heated as to destroy its tenacity, the patentee made the shank in one piece, and the two flukes in another; and the piece intended for the arms was formed of such a thickness in the middle as to allow a hole to be made through the centre, to receive the thick end of the shank; the hole was made conical or bell-mouthed, so that no strain could separate the flukes from the shank; by which means the necessity of endangering the solidity of the materials was avoided, only one heat being necessary to bring the thick end of the shank and the hole into perfect contact. In an action for an in-

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[75] The King v. Lister, Gods. Sup. 71. Hadden's patent was also repealed on scire facias at the instigation of Lister on the ground that it was not a new invention. The King v. Hadden, Gods. Sup. 71.

fringement, Abbott C. J. said that "the improvement claimed by the patentee, was precisely the method by which the shank of the mushroom anchor is united to the mushroom top; by which the shank of the adz anchor is united to its other parts. It is indeed the mode by which the different parts of the common hammer, and the pickaxe also, are united together. Now a patent for a machine, each part of which was in use before, but in which the combination of the different parts is new, and a new result produced, is good; because there is a novelty in the combination. But here the case is perfectly different; formerly three pieces were united together; the plaintiff only unites two; and if the union of those two had been effected in a mode unknown before, as applied in any degree to similar purposes, I should have thought it a good ground for a patent; but unfortunately, the mode was well known and long practised. I think that a man cannot be entitled to a patent for uniting two things instead of three, where that union is effected in a mode well known and long practised for a similar purpose. It seems to me, therefore, that there is no novelty in this improvement." Bayley J. "Could there be a patent for making, in one entire piece, what before had been made in two pieces? I think not. After having had a one-fluked anchor, could you have a patent for a double-fluked anchor? I doubt it very much. After the analogies alluded to in argument of the hammer and pick-

axe, I do not think that the mere introducing the shank of the anchor, which I may call the handle, in so similar a mode, is an invention for which a patent can be sustained. It is said, in this case, that the mushroom anchor and adz anchor, are not ships' anchors, but mooring anchors. I think they are ships' anchors; they are not indeed such anchors as ships carry with them for the purpose of bringing the ship up; but if the ship is required to be stationary, at a particular place, then the common mode of making it stationary, is by the mushroom anchor. So the mode adopted to bring a ship containing a floating light to an anchor, is by mooring her to one of these mushroom anchors. That is the description of anchor for a holdfast to the ship. The analogy between the case of the mushroom anchor and of the adz anchor is so close to that of the present anchor, that it does not appear to me that this discovery can be considered so far new as to be the proper ground of a patent." Best J. "It is said that the invention consists in the application of that which was known before to a new subject matter, viz. that the patentee had, for the first time, applied to the manufacturing of anchors, a mode in which welding was avoided, which however had been long practised in other instances; but the patentee does not state that as the ground upon which he had applied for his patent, nor state in the specification, that it being known that the process of welding weakens the

anchor, he had first applied to an anchor a mode long practised in the manufacture of other instruments, viz. of making the two flukes of one piece instead of two. If he had so described this process, the question would then arise, whether that would be a good ground for a patent. I incline to think, however, that it having been long known that welding may be avoided in instruments of a similar form, the application of that practice for the first time, to a ship's anchor, cannot be considered a new invention, and, therefore, that it is not the ground of a patent. It is unnecessary, however, to decide that question in this case, because the patentee has claimed the mode of avoiding welding as a new discovery."[76]

Mr. Chief Justice Gibbs gives an illustration of variation in form merely. In the case of Bovill v. Moore, (Dav. Pat. Cas. 361,) he mentions the expedient used by a man in Cornwall, who endeavored to pirate the steam-engine. "He produced an engine, which, on the first view of it, had not the least resemblance to Boulton and Watt's; where you looked for the head, you found the feet, and where you looked for the feet you found the head; but it turned out that he had taken the principle of Boulton and Watt's—it acted as well one way as the other; but if you set it upright it was exactly Boulton and Watt's engine."

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[76] Brunton v. Hawkes, 4 B. & Ald. 540.

The distinction of a mere formal variation from a substantial improvement is in many cases very nice. In a case before Lord Ellenborough, Huddart had obtained a patent for a new mode of making cables and other cordage. It appeared that his invention differed from Belfour's, because that which was effected with a ring by Belfour, was produced by a tube in the mode of making ropes by Huddart. Lord Ellenborough "The tube does seem to me an important difference from the mere circle through which the strands pass, because it keeps them in a degree of confinement for a longer time, and more certainly obtains the end pointed out; in Mr. Belfour's specification the same end is to be attained; and had the patent been taken for that to be done by a tube, which was before done by a ring or circle, I should have thought the patent good; for that is a distinct substantive invention.[77]

The substitution of one material for another is not, at least ordinarily, an invention for which a patent can be claimed. Sir John Leach, in an argument made by him as counsel, in the case of an alleged improvement in the construction of barrels for containing gunpowder, said, "The making of an old machine of new materials, could not be a discovery; and the plaintiff could claim no protection, for an invention, the only merit of which consisted in being

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[77] Huddart v. Grimshaw. Dav. Pat. Cas. 297.

made of brass instead of wood. When tea was first introduced into this country, earthen teapots were used; but could a person who made the first one of silver be entitled to a patent?"[78] This position is correct in general, and yet there may be cases in which the substitution of a different material may be a matter of contrivance and invention, and in such a case the particular mode of applying the new material would be a good subject of a patent.

The provision on the subject of change of proportions is expressly extended by the act of Congress, ot compositions of matter as well as to machines, and yet there are instances of compositions of matter in which the proportions are material. In one case one ground of holding the patent to be void, was, that the exact proportions in which lime and other ingredients were to be used in making iron, to prevent *cold-short*, were not stated.[79] This was assuming the proportions to be material, and if so, then a change of proportion may be an essential improvement. When the invention depends materially on the proportions of a mixture or composition of matter, and where, accordingly, a change in this respect makes a different process or a different result, such

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[78] Walker v. Converse. Rep. of Arts, 2d Series, Vol. 29, p. 311. Mr Godson cites this argument of Sir John Leach as an opinion given by him as Vice Chancellor.

[79] Hill v. Thompson, 3 Meriv. 624.

a change would certainly come within the description of patentable subjects in the second section of the act of Congress; it would not be "simply" a change of proportions.

The French law of 1791 classes mere ornaments with changes in form and proportions, as not being subjects of patents. But this appears to be a very questionable position, for it would never be contended in case of an invention of which a part was ornamental merely, that this part might be infringed with impunity; and there appears to be no more ground for yielding any more protection to ornamental parts in an original invention, than in an improvement, or in a case where a part of the invention was ornamental, than one which should be wholly confined to ornament.

Sec. XIII.—Legality.

An invention, to be patentable, must not only be new, but lawful. The sixth section of the English statute of monopolies, permits the monopolies of new manufactures, "so they be not contrary to the law." The acts of Congress which constitute our patent law, contains no similar provision; nor was any such necessary in the act of Parliament, since it would be implied, though it were not expressed. The construction put upon the acts of Congress by the Amer-

ican courts in this respect, is the same as that put upon the act of Parliament by the English courts.

A very ingenious instrument is said to have been invented by a London pickpocket to facilitate the practice of his art, of which he made the first experiment, and successfully, upon the artist by whom it was manufactured. There needs no express exception to prevent such an instrument from being patentable, since it would be quite absurd to encourage and reward by one law the art of violating another. So a chemical composition for poisoning people without danger of detection, would not be the subject of a monopoly under the patent law. This is in pursuance of a universal principle of jurisprudence. It is the principle of construction of the French patent law, which contains no express exception of unlawful industry. "It would," says M. Renouard,[80] "be preposterous to guaranty to a man the exclusive right of doing what the law would punish when done."

Sec. XIV.—Usefulness.

By the sixth section of the English statute of monopolies it is provided that, in order to exempt a manufacture from the general prohibition of monopolies, it must be one that is "not mischievous to the

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[80] p. 167. c. 5. s. 12.

State by raising the price of commodities at home, or hurt of trade, or generally inconvenient." The only part of the act of Congress of 1793, in this respect, is simply the epithet *useful*, the provision of the first section being, that if any one shall allege that he has invented a *useful* art, machine, manufacture or composition of matter, he may apply for a patent. Mr. Godson says, in regard to the requisite usefulness, that "if the article that is produced by the machine be old, it must be furnished to the public at a much cheaper rate. The community must receive some benefit from the invention; and when it is not a new article which is introduced, the old one must, in some respect, be rendered a better commodity for trade."[81]

In some of the earlier cases in Pennsylvania and Massachusetts for infringements of patents, the defendants, putting the same construction upon the act of Congress as that put upon the English statute of monopolies by Mr. Godson, and by some of the English judges, set up the defence that the machine, for the infringement of which the action was brought, was not a *useful* one, as it was no improvement on the methods previously in use for the same manufacture, and accordingly that it did not come within the description of inventions for which a patent was au-

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[81] Treatise on Patents, p. 70, 71. See Manton v. Manton, Davis's Pat. Cas. 349; Lewis v. Davis, 3 Car. & P. 502. See also remarks of Abbott C. J. 2 B. & Adol. 349.

thorized.[82] On this ground of defence the decisions of Mr. Justice Story are very full and explicit. He says, "By *useful* invention, in the statute 1793, c. 156, is meant such a one as may be applied to some beneficial use in society, in contradistinction to an invention which is injurious to the morals, the health, or the good order of society. It is not necessary to establish, that the invention is of such general utility as to supersede all other inventions now in practice to accomplish the same purpose. It is sufficient that it has no noxious or mischievous tendency, that it may be applied to practical uses, and that so far as it is applied it is salutary. If its practical utility be very limited, it will follow, that it will be of little or no profit to the inventor, and if it be trifling, it will sink into utter neglect. The law, however, does not look to the degree of utility; it simply requires, that it shall be capable of use, and that the use is such as sound morals and policy do not discountenance or prohibit."[83]

In an action for an infringement of a patent for an improvement in the construction of pumps, the same judge said, "that it was contended by the defendant that it was necessary for the plaintiff to prove, that his invention is of general utility; so that in fact, for the ordinary purposes of life, it must supersede the

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[82] Gray & Osgood v. James and others, 1 Pet. C. C. R. 480, 481.
[83] Bedford v. Hunt, 1 Mason, 302.

pumps in common use; in short, that it must be for the public, a better pump than the common pump; and that unless the plaintiff can establish this position, the law will not give him the benefit of a patent, even though in some peculiar cases his invention might be applied with advantage. I do not so understand the law. The St. 1793, c. 156, uses the phrase *useful* invention merely incidentally; it occurs only in the first section, and there it seems merely descriptive of the subject matter of the application, or of the conviction of the applicant. Neither the oath required by the second section, nor the special matter of defence allowed to be given in evidence by the sixth section of the act contains any such qualification or reference to general utility, to establish the validity of the patent. Nor is it alluded to in the tenth section as a cause for which the patent may be vacated. To be sure, all the matters of defence or of objection to the patent are not enumerated in these sections;[84] but if such a one as that now contended for, had been intended, it is scarcely possible to account for its omission. In my judgment the argument is utterly without foundation. All that the law requires is, that the invention should not be frivolous, or injurious to the well-being, good policy, or sound morals of society. The word *useful*, therefore, is incorporated into the act in contradistinction to mis-

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[84] Whittemore v. Cutter, 1 Gallison, 429. 435.

chievous, or immoral. For instance, a new invention to poison people, or to promote debauchery, or to facilitate private assassination, is not a patentable invention. But if the invention steers wide of these objections, whether it be more or less useful is a circumstance very material to the interest of the patentee, but of no importance to the public. If it be not extensively useful it will silently sink into contempt and disregard."[85]

Mr. Justice Story hints, upon this kind of defence, in a case of infringement, that it, in some cases, reduced the defendant to a dilemma, since if he had not used the invention, there was no occasion to resort to this defence; if he had, the averment that it was useless came with an ill grace from him, since it was contradicted by his practice.[86] This ground of defence accordingly does not appear very frequently in the reports. It does, however, sometimes appear and is recognised as a valid objection to a patent.

It was held in England, that in an action for the infringement of an improvement, the inutility of the original invention, could not be given in evidence in defence, or in other words, though the original invention was not useful, the improvement might be so,

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[85] Lowell v. Lewis, 1 Mason, 182; and see also Earle v. Sawyer, 4 Mason, 6.

[86] Lowell v. Lewis, 1 Mason, 186.

for it might remedy some defect in the original invention, or remove some objection to it.[87]

So Mr. Justice Washington ruled, that taking this requisite in the strongest sense, still a machine might be considered useful within the act of Congress, if, by an improvement, it was capable of being advantageously put into operation. "It is not," he remarked, "the intrinsic value of the thing itself, but its capacity to be converted into something which may be useful, that gives it value. Admit, for the sake of argument, that Perkins's machine, (the one infringed upon,) in the form in which it came from his hands, was so far inferior to the nail machines then in use as to deprive it of all intrinsic value; yet if another person can superadd to that invention something which will remove all its defects, and render it useful, it immediately becomes valuable, not on account of its own qualities, but because of its capacity to receive the improvement, and with its aid to become useful. The original discovery and the improvement become articles of traffic between the two discoverers as soon as the improvement was made which it was their mutual object to give value to."[88]

But in the more restrained sense, according to the construction of Mr. Justice Story, which is now uni-

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[87] Lewis v. Davies, 3 Car. & P. 502.

[88] Gray & Osgood v. James & others, 1. Pet. C. C. R. 480, 481.

versally adopted in the United States, the improvement on an invention that is not useful, or in other words, that is pernicious, or in the words of the English statute of monopolies, "mischievous to the state or generally inconvenient," cannot be useful, unless it diverts the invention into a different channel clear of the objection; and in this restrained sense the invention cannot be considered useful according to the doctrine of Mr. Justice Washington in the above case, on the ground that it is capable of being rendered so by an improvement.

The requisite of usefulness has been sometimes contrasted with frivolousness,[89] and the multiplicity of patents for trivial subjects has been occasionally deprecated by judges.[90] An invention may be slight and trivial as being so obvious and apparent that it cannot be considered a discovery, or it may be trivial or frivolous in respect to its effect upon industry and production. A defect in the first sense renders the patent void as being for a subject that is not an invention. But an invention of a very slender character in the latter sense is still the subject of a patent, since it is not the province of the court to go into the question of the extent or degree of usefulness. It is enough that the invention is useful; how useful it may be is immaterial.[91] The inutility of an

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[89] Kent's Com. Vol. 2, p. 368, n. Lowell v. Lewis, supra 139.
[90] Thompson v. Haight, U. S. Law Journal, Vol. 1, p. 563.
[91] Lowell v. Lewis, supra, 139, 140.

alleged invention was one of the grounds of decision against a patent in a case that came before Mr. Justice Livingston in the Circuit Court of the United States in New York, on a specification for "an improvement in folding the thread and floss cotton into skeins or hanks of a convenient quantity for retailing, with a sealed wrapper round the same, and a label containing the number and description of the article." The cotton thus folded was imported from the factory of Holt, in England. The article itself underwent no change, and the whole of the improvement consisted in putting up skeins of it, perhaps of the same size in which they were imported, decorated with a label and wrapper ; thus rendering their appearance somewhat more attractive, insomuch that it sold at a price twenty-five per cent. higher than before it was so put up. When stripped of these appendages, which it must be before using it, the cotton was no better in any respect than when put up by Holt. Mr. Justice Livingston said, "Now that such a contrivance—for with what propriety can it be termed a useful art within the meaning of the constitution ?—may be beneficial to a patentee, if he can exclude from the market all other retailers of the very same article, will not be denied ; and if to protect the interest of a patentee, however frivolous, useless or deceptive his invention may be, were the sole object of the law, it must be admitted that the plaintiff has made out a satisfactory title to his

patent. But if the utility of an invention is to be tested by the advantages which the public are to derive from it, it is not perceived how this part of his title is in any way whatever established. Is any thing done to alter the texture of the cotton, or to render it better or more portable or more convenient for use? Nothing of this kind is pretended." On these grounds, and especially as the court thought that the patentee held out a false appearance and imposed upon purchasers, the patent was held to be void.[92]

An invention, to entitle the inventor to a patent, "must," says Mr. Chancellor Kent, "be, to a certain extent, beneficial to the community, and not injurious or frivolous or insignificant."[93]

The French law does not pretend to take cognizance of the utility of the invention. Every new species of legal industry, says M. Renouard[94] is the proper subject of a patent, however trifling may be its utility. To exclude the inference that the patent is any guaranty of the character of the invention, the declaration has been inserted in the patent, that the government, in granting it without any preliminary examination, did not intend to guaranty, in any de-

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[92] Langdon v. De Groot, 1 Paine R. 203.

[93] Com. Vol. 2, p. 369. Cites Lowell v. Lewis, 1 Mason's R. 182; Evans v. Eaton, 1 Pet. C. C. R. 322; and above case of Langdon v. De Groot.

[94] P. 177, c. 5, s. XV. 1.

gree, either the novelty or the merit, nor the success of the invention. This clause was introduced on the occasion of an application for a patent for a phenomenon in acoustics, by means of which answers were given to questions put in a low voice, without the inquirer's seeing the person who gave the answers. This was called the *invisible woman.* When Lucien Bonaparte, being then minister of the interior, presented that patent with divers others for the signature of Napoleon, then first consul, the latter threw the paper under the table, taking offence that it should be proposed to him to sign such frivolous documents. The minister of the interior attempted to demonstrate to him that the law ordered the issuing of patents without previous examination, however useless or absurd even, might be their objects. Thereupon the first consul proposed the three following questions to the board of arts and of commerce:

1. Whether some form of despatching these documents might not be devised that would dispense with the signature of the first consul. 2. Whether patents ought to be granted for frivolous subjects. 3. Whether a mode of granting patents might not be devised that would prevent disputes concerning priority, and the abuses which patentees might make of their privilege by representing the patent as a certificate and favorable attestation of the government, and thus leading persons into error who did not know that patents were granted without any consideration of

their merits. In consequence of these queries the above clause was introduced into the French patents.

Sec. XV.—Vendibility.

In connexion with the requisite of usefulness, we may mention another which has been considered to be indispensable, both under our act of Congress, and under the statute of monopolies, namely, that either the means or instrument, or the product of the art, method, or process patented, must be *vendible*. This word, in its ordinary sense, does not precisely express the quality intended, its usual meaning being, that the thing to which it is applied is in demand, which is not the case with all inventions. It is not provided by law that the patentee shall either sell or offer for sale, or be able to find a purchaser for the thing of which he has the monopoly; nor has either of these conditions been insisted upon by any construction put upon the law. The making any such condition would be the same as to make it imperative upon a party to whom a reward is offered to accept it. The meaning of monopoly, (and a patent, as we have seen, is one,) is the exclusive *privilege* of selling the subject of which the monopoly is granted. In some monopolies, as, for instance, that of the trade to a particular foreign port, or in a particular article, a condition may be made that the

monopolist shall avail himself of the privilege or lose it. So it might be provided in the patent law, that the patentee should either himself make the thing to which the patent relates, or authorize others to do so, and that the subject patented, or its products, should be offered for sale; still if it leaves him the privilege of fixing his price, this would put it in his power to prevent the sale, and so render the requisition that it should be offered for sale, ineffectual.

If the law should go still further, and provide for prescribing the terms on which the article should be offered for sale, by referring it to some board to regulate the market value, it would subject the monopolist to much embarrassment, and, at least, greatly impair the value of his privilege, besides opening a door to vexatious interference and abuse.

There might be still another provision on this subject, requiring that the matter to which the patent related, or its products, should be sold publicly within a certain time, under penalty of forfeiture of the privilege. But if the quantity or number of specimens were not fixed, the provision might be easily evaded, and, in order to fix the quantity or number of specimens, it would be necessary to constitute a board, with an arbitrary discretion in the case; to which there would be the same objections as to a board for regulating the price.

Then, again, the reason why the patentee makes no sale, may be that the invention is considered of

no value whatever by any person, excepting the inventor himself, and so other persons do not regard his exclusive privilege to be any interference with their pursuits or interests. This is, in fact, the case with many patents; and, in all these instances, there is no motive for any requisition or regulation on the subject.

And, finally, in still another case, a sale may not be practicable, though the invention may be useful and valuable, merely because it is not well understood by other persons than the inventor, or because no one, who has the proper means and facilities for putting it into actual operation, has made it a subject of his attention.

There are reasons why the law does not, and should not, either expressly or by construction, require that the invention, or its products, of which the privilege of exclusive sale is granted, shall be sold or offered for sale. It may be asked then, whether there ought not to be some provision against the perverseness of a patentee, who should willingly sacrifice his own interest for the satisfaction of acting the dog in the manger, and enjoy his exclusive privilege, by observing how much the public is incommoded, and how great a benefit it is in his power to withhold from them? Certainly not; for this is an inconvenience and deprivation to which the community is exposed in another case, namely, that of an artist who is able, by his superior genius and skill,

to produce the most admirable work, but who, from indolence, or some other vice, or, as sometimes happens, from mere waywardness, neglects to make use of the exclusive privilege conferred by his superior genius and skill. His privilege differs, at the first view, from that of a patentee, inasmuch as that of the latter is one of express grant from the government; but this difference will not be so material, on consideration, as it might at first view appear, since the grant is made, not like that of a branch of foreign trade, in consideration that it is to be used during the existence of the privilege, but in consideration that the patentee has given a specification whereby the public may have the benefit of his invention at the expiration of his privilege. During the privilege, therefore, all the conditions having been complied with, it stands on the same ground as any other private right, as that of property, or of using one's industry, and so should be subject to the same rules of legislation and regulation, and no others. In regard to all kinds of private rights, the community is affected by the good or bad use of them; but in this, it is necessary to rest, in some degree, upon individual discretion, since it is impossible to give directions for the use of all individual rights, in all respects, and one universal exception is made to the expediency of any legislative regulation, namely, when the real and obvious interest of the individual is coincident with that of the public.

In such cases, the interest of the community is generally left free to be promoted or prejudiced, according as the individual has or has not the good sense to make the use of his rights, that his own interest, properly understood, would dictate.

If, then, the doctrine that the subject of a patent or its products, must be vendible, does not mean that a demand for it must exist, nor that there must necessarily be an offer for sale, as an essential condition of the validity of the monopoly, what is the construction to be put upon the doctrine? It is, that the thing patented, or its products or results, must be of a vendible character or description; or, such as *can* be the subject of a sale. This is the construction given to the rule by Mr. Godson,[95] for which he cites the expressions of judges, in giving their opinions in patent cases, though he says no case has turned upon precisely this question.[96]

Sec. XVI.—Novelty, Priority.

It is an essential requisite that the invention shall be *new*. This is expressly provided in the English and American statutes, on this subject. The very

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[95] p. 65.

[96] He cites the expressions of Heath J., 2 H. Bl. 482; Kenyon C. J., 8 T. R. 99; and Abbott C. J., 2 B. & Ald. 349, 350.

terms *invention* and *discovery* import, in their general and most obvious signification, that the thing discovered or invented is *new* to the inventor. But it is not so distinctly and necessarily implied in those terms how far it must be new to other persons, as to exclude all doubt, since an invention may be new to the inventor, which is familiar to many others; or it may be new in his neighborhood, and well known in other parts of the country; or it may be new in his own country, while it is in familiar use abroad. And again, although it may have been already known, it may have been so recently invented, as to be still *new*, at the time of the posterior invention. Had the statutes stopped here, however, and authorized a patent for a *new* invention, without further explanation, the expression must have been limited by construction, and confined to a patent either to the first or *original* inventor, or to the first applicant for a patent, since the patent is an *exclusive* privilege of the making and vending the thing patented, and it is therefore necessary, in order to give the statute effect, to define expressly in the act, or in the construction put upon it, by what criterion the novelty is to be tested. The statutes do not accordingly stop here; they both go further, and define what is to be understood by the thing being new. The statute of James limits the privilege to manufactures, "which others at the time of the making such letters patents, and grants,

did not use." So the act of Congress limits the privilege in like manner to the things "not known or used before the application" for the patent.

On this subject of the novelty of the invention, we shall find some discrepancies between the English and the French law on one side, and that of the United States on the other.

The first inquiry relates to the time in reference to which the invention must be new. Must it be so at the time of the granting of the patent, or at least at the time of the application for it, or is it enough that it is so at the time of the invention by the party claiming a patent? M. Renouard seems in one place to consider it requisite in France that the thing should be new at the time of issuing the patent. He says[97] "it is very rare that the discussion may not be referred to this single inquiry, namely, whether the public, at the moment of the delivery of the patent, does, or does not, receive the communication of a species or mode of industry which it did not before possess;" if it does the patent is valid, otherwise it is null. This is the rigorous doctrine of the English law,[98] from which M. Renouard apparently adopts it.

The doctrine strikes the mind as preposterous in either country, but more palpably so in England, where ordinarily very considerable time necessarily

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[97] C. 5. s. 1. p. 174.

[98] Jones v. Pearce, Godson Sup. 4.

elapses between the application and the granting of the patent, so that the inventor thereby, in the very act of applying for a patent, takes the hazard of defeating his right to one, since he thereby gives some publicity to his invention, and thus unavoidably holds out to others a facility in pirating it before the patent can be issued, and so is obliged to risk the rendering his patent void by the very means he is compelled by law to take to obtain it. Nothing can be imagined more preposterous than this doctrine. It could hardly be supposed that a doctrine, so repugnant to the principles and spirit of the patent laws, could have arisen by such construction of language, which admitted of any other interpretation; and we accordingly find by recurring to the fifth and sixth sections of the English statute of monopolies, which constitute the patent laws of England, that it is derived from the language of the law taken in a strict and literal sense. The sixth section of that law, after abolishing monopolies generally, makes an exception of temporary monopolies for the sole working and making of any manner of new manufactures to the true and first inventor, "which others, *at the time of making such letters patents and grants, shall not use.*"

By taking this clause in a literal sense, the English courts have gone far towards defeating and annulling the encouragement intended to have been given to inventors by these sections; and if we may rely

upon M. Renouard's exposition of the French law, the same doctrine, so fatal to patents in England,[99] has been adopted in France. The operation of the doctrine would not probably be so prejudicial to the interests of inventors in that country as it has proved to be in England, since, in examining the proceedings for the taking out of a patent, as described by that author, it seems that much less time would be requisite than is necessarily consumed in England, in applying to one office after another, before the inventor can obtain the grant promised to him by the law. Still the doctrine is the same, and bears upon its face the same absurdity, in one country as in the other. It has the effect of exposing the inventor to the loss of his right by piracy, if he delays taking out his patent for the purpose of making experiments to perfect his invention.[100] The ground of this doctrine, as far as it can be supported otherwise than on the literal provision of law, is, that a thought or art having been published, and the public having taken advantage of it and reduced it to use, is their property, from whatever source they may have obtained the information. But a moment's reflection will show us that there would be the same reason precisely for sheltering a public use arising after the grant of the

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[99] Westm. Rev. No. 43, Jan. 1835. Foster's Am. Edit. p. 100.

[100] Westm. Rev. No. 43, Jan. 1835. p. 100, Foster's Am. Ed.; where the writer cites the evidence taken before the Committee of the House of Commons on this subject.

patent, as one arising after the application for it, since the application may as well be presumed to be known to all people as the patent.

There does not, on the whole, seem to be any foundation for this doctrine, unless it is found in a stern provision of the law, too plain and absolute to be controlled by construction, which is not the case with the sections of the statute of monopolies above cited, since it is an absurdity so to construe a law as to hold that the very means prescribed by the law as a compliance with its provisions, should, without any fault of the party for whose benefit the law is made, expose him to a forfeiture of its benefits. We shall introduce the authorities as to the degree of publicity and kind of use by others by which the inventor forfeits his privilege, in a subsequent part of this chapter; for whether the time to which reference is had in determining on the novelty of the invention be the date of the invention, of the application for a patent, or the grant of it, the doctrine as to use, degree of publicity or extent and kind of use whereby the patent is defeated, may be the same. The cases subsequently cited will show very distinctly that the doctrine of the English law is as above laid down, and, in the course of the examinations that took place on the subject of patents before the committee of the British House of Commons in 1832, a number of the gentlemen whose statements were taken by the com-

mittee, represented, in very strong terms, the inconveniences resulting to patentees from this doctrine.[101]

The same question has come up in discussion in the United States. "There is," says Mr. Justice Story, "a difference between the language and effect of our statute respecting patents, and that of England. The statute 21 Jac. 1, c. 3, prohibits the grant of monopolies generally; but in the sixth section it excepts 'letters patent and grants of privileges for fourteen years or under, 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 manufacture, which *others, at the time of making such letters patent and grants, shall not use.*' Upon this statute it has been held, that it is not necessary that the invention should be new to all the world, but it is sufficient, if *new within the realm of England*, and it matters not whether learned by travel or by study. The provision further is, that it must be an invention which others, at the time of making the letters patent, '*shall not* use.' Therefore it was held, in Wood v. Zimmer, (Holt's R. 58,) by Lord Chief Justice Gibbs, that if the inventor, before obtaining a patent, allows his invention to go into public use, he cannot entitle himself to a patent. The public sale of it, by the inventor to other persons for use, makes the patent void. It is not then *new* to the

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[101] Westm. Review, No. 43, Jan. 1835. Foster's Am. Ed. p. 100.

realm, but is *used* by others within the meaning of the statute."

"The patent act of the United States, st. 1793, c. 156, uses language somewhat different. The first section declares, that 'when any person or persons, &c. shall allege that he or they have invented any *new* and useful art, machine, manufacture, or composition of matter, or any *new* and useful improvement on any art, machine, manufacture, or composition of matter, *not known or used before the application*,' he or they shall, on application to the Secretary of State, &c. be entitled to a patent. If this were all, there would be great difficulty in construing the words 'not known or *used* before the application' differently from the words of the English statute, 'which *others*, at the making of the letters patent and grants, shall not use.' We should be driven, therefore, to consider the accuracy of the decision of Lord Chief Justice Gibbs.' But the sixth section of the st. 1793, c. 156, throws light on this subject, and enables the court to ascertain with more precision the intention of the legislature. That section authorizes the defendant to give certain matters in evidence, by way of defence, under the general issue, upon proper notice, and among other things, that the thing thus secured by patent was not originally discovered by the patentee, but had been *in use*, or had been described in some public work, anterior to the supposed discovery of the patentee. Upon these clau-

ses it has been uniformly held, that it must be shown that the invention is new, not only in the United States, but to the world, and that it was not *in use* before the asserted discovery. The fact of its being *in use* before his *discovery*, is, by the sixth section, made decisive against the patentee. Now if the intention of the legislature had been, by the first section, to provide that the mere fact of the invention being '*known or used*' even with the inventor's permission, before the application for a patent, should destroy his right, however otherwise well founded, it is strange, that the use should not be limited, in the sixth section, to the time of such *application* instead of the '*supposed discovery*.' The sixth section manifestly proceeds upon the ground, that the same thing being in use at the time of the supposed discovery, establishes, that there is nothing new in the invention; but it may be known and used at the time of the application for a patent, and yet the applicant have been the true and first discoverer. And the words of the first section are susceptible of the same construction. The things sought to be patented must be something 'not known or used' by others before, but must be *first* known or *first* used by the person claiming to be the inventor; that is, others must not have known or used it before his discovery. Upon any other construction, if a party were the true and first inventor, yet if, before his application for a patent, another were to know his invention or use it,

piratically or innocently, the first inventor would be ousted of his right to a patent, which is inconsistent with the spirit of the act. Construing, therefore, the first section by the sixth, it seems to me, that the true meaning is, that the first inventor has a right to a patent, though there may have been a knowledge and use of the thing invented, by others, before his application for a patent, if such knowledge or use was not anterior to his discovery."[102]

It being once settled that the first inventor is entitled to a patent, it follows of course that the period referred to for testing the novelty of the invention is not the date of the *application*, since, at this date, in case of successive independent inventions of the same thing, whichever of the inventors applies, the manufacture has been *known* and *used* by another person independently of the applicant. The general object of the law must, therefore, be defeated in those cases where there are independent inventions of the same thing, or the date, not of the application, but of the invention, must be referred to in determining on the novelty of the art or manufacture. At the time of the invention by the prior inventor he has a right to a patent, of which he may avail himself unless he subsequently forfeits that right. By the law on this subject, as construed and administered in the United States, he may realize the fruits of his invention un-

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[102] Mellus v. Silsbee, 4 Mason, 108.

less he loses them by his own negligence; whereas in England, as we have seen, he may be deprived of his privilege, though he may not be chargeable with any fault or negligence. The characteristic difference between the law on this point, as administered in England and the United States, is, that in England the inventor is not supposed to have any right whatever in his invention until the grant of the patent, whereas in the United States the law supposes him to have a right at the time of invention, which he may forfeit, it is true, but which it depends on himself either to forfeit, or, by taking the proper steps, to perfect and establish.

In reading the English and American cases, it is necessary to bear constantly in mind the distinction above pointed out. In regard to England, for instance, if the inquiry relate to the use of the invention by others as affecting the rights of the patentee, the use or *knowledge* at the time of granting the patent is referred to, whereas in the United States the inquiry would, to many purposes, relate to the use made of the manufacture by others at the time of the patentee's invention, for we suppose him to invent the thing at any rate, in order to raise any question, since, if he be not the inventor, he has no claim for a patent; and, on the other hand, if he be the inventor, he has no claim, if others knew of and used the art or manufacture at the time of his making the invention.

There is a distinction in terms between a prior *invention* and a prior *use*, though in relation to this subject the two expressions mean, in some respects, substantially the same thing, but in other respects they are distinguished from each other. In the leading sense of the term *invention* it signifies an intellectual process, that is, to use Dr. Johnson's definition, an *excogitation*. In treating of the subject of invention in a former section,[103] it appears, however, that the law does not regard a mere conception, imagination, or intellectual process, as being the subject of a monopoly, independently of its reduction to use. The things for which patents are grantable, we have seen, must be arts, machines, manufactures, practical methods or processes or applications of principles, or compositions of matter; to lay a foundation for a patent, something must be wrought, done or produced. The same construction is necessarily adopted in considering the question of prior invention, the question of priority is not limited to the mere conception, but has respect to the invention as already explained, and if the patentee is the prior inventor in this sense his patent will not be defeated merely because some other person may before have imagined something of the same sort.

That the prior inventor, in the sense already ex-

[103] Section 8.

plained, has the preference, and is entitled to a patent, unless he forfeits his right, is held in many cases.[104]

The kind of use or reduction to practice, and putting into operation, necessary to constitute an invention, so as to entitle a party to a patent, or to defeat the claim of a subsequent inventor, is very distinctly pointed out by Mr. Justice Story. He says, "The first inventor, who has put the invention in practice, and he only, is entitled to a patent. Every subsequent patentee, although an original inventor, may be defeated of his patent right, upon proof of such prior invention's being put in use. The law in such case cannot give the whole patent right to each inventor, even if each be equally entitled to the merit of being an original and independent inventor; and it therefore adopts the maxim, *qui prior est in tempore, potior est in jure.* The statute 1793, c. 156, s. 6, declares it a good defence to an action for the infringement of the patent right, 'that the thing thus secured by patent was not originally discovered by the patentee, but had been in use, or had been described in some public work anterior to the supposed discovery of the patentee.' The intent of the statute was to guard against defeating patents, by the setting up of a prior invention, which had never

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[104] Lowell v. Lewis, 1 Mason's R. 183. Per Dallas J., Hill v. Thompson, 2 J. B. Moore, 451.

been reduced to practice. If it were the mere speculation of a philosopher, or a mechanician, which had never been tried by the test of experience, and never put into actual operation by him, the law would not deprive a subsequent inventor, who had employed his labor and his talents in putting it into practice, of the reward due to his ingenuity and enterprise. But if the first inventor reduced his theory to practice, and put his machine or other invention into use, the law never could intend, that the greater or less use in which it might be, or the more or less widely the knowledge of its existence might circulate, should constitute the criterion by which to decide upon the validity of any subsequent patent for the same invention. I hold it, therefore, to be the true interpretation of this part of the statute, that any patent may be defeated by showing that the thing secured by the patent, had been discovered and put in actual use, prior to the discovery of the patentee, however limited the use or the knowledge of the prior discovery might have been."[105]

In an action for the violation of a patent right to a machine for making cotton and wool cards, the same judge said that "it would not be sufficient to protect the plantiff's patent, that this specific machine, with all its various combinations and effects, did not exist

[105] Bedford v. Hunt, 1 Mason, 302.

before; for if the different effects were all produced by *the same application* of machinery, in separate parts, and he merely combined them together, or added a new effect, such combination would not sustain the present patent which was taken out for the whole machine, any more than the artist who added the second-hand or repeater to a watch, could have been entitled to a patent of the whole watch."[106]

In another case the same judge says, "The first inventor of a machine is entitled to the benefit of his invention, if he reduce it to practice and obtain a patent therefor; and a subsequent inventor, although without any knowledge of the prior existence of the machine, or communication with the first inventor, cannot, by obtaining a patent therefor, oust the first inventor of his right, or maintain an action against him for the use of his own invention."[107]

A case in the English reports supplies an exception to the doctrine as to the priority of invention which will entitle the inventor to a patent as above laid down, namely, where the first inventor, though he reduces the invention to use, yet keeps it secret, and shows an intention not to give the public the benefit of it. It was the case of an improvement in

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[106] Whittemore v. Cutter, 1 Gallison, 482.

[107] Woodcock v. Parker, 1 Gallison, 438. See also Bedford v. Hunt, 1 Mason's R. 302; Evans v. Eaton, 3 Wheat. R. 454; S. C. 1 Pet. C. C. R. 322; Reutgen v. Kanowrs, 1 Wash. C. C. R. 168; Dawson v. Follen, 2 Wash. C. C. R. 311.

the object-glass of telescopes, invented by Mr. Hall, but suppressed by him until Mr. Dolland had subsequently made the same invention and procured a patent for it, the validity of which was disputed on the ground that he was not the first inventor. But the patent was held to be valid.[108]

Mr. Justice Buller puts this case upon the ground that Dolland was the first publisher of the invention, but it cannot be supported upon this ground merely, since it would put the priority, not upon the circumstance of the invention, but of the publication, which would be contradictory to the current of the decisions. It must stand upon the ground that, as the first inventor did not give the public that advantage of his discovery which it was the intention of the patent laws to secure, he should not stand in the way of a subsequent inventor who should be ready to give the public such advantage, at the end of the period of the monopoly provided for by the patent laws.

Mr. Justice Washington has laid down a doctrine at variance with that of Dolland's case. He considered that the inventor lying by for ever so long a period, and not taking out a patent, or continuing to use his invention, did not thereby forfeit his right of a patent, and that he might thus stand in the way of a patent being granted to any other inventor of

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[108] 2 H. Bl. 467. See also Forsyth v. Reviere, Chitty Jr's. Prer. of the Crown, 182, n.

the same thing. His decision divides itself into two propositions; first, that the inventor, by thus lying by, did not forfeit his own right; and second, that he might thus intercept others, and these two propositions are not identical, or equivalent to each other, for he might thus lose his own right, and yet a patent for a subsequent discovery of the same thing be defeated by him. Whether he forfeits, his right will be subsequently considered. There are strong reasons for holding that he may thus forfeit his right, and if it be so held, then the doctrine of Dolland's case may be well founded.

There is one case, however, where, by our law, the priority must be determined by the date of the patent, namely, that of simultaneous inventions by different persons, neither of whom is apprized of the other's invention; for in these circumstances, the party who has first obtained a patent is presumed to have a right until the contrary is shown, and it would be impossible to prove a prior or better right in another person. But if both applied at the same time for a patent, and their claims were referred to arbitrators, according to the statute, no patent could be granted unless the point of priority were decided in favor of one of them; and perhaps a case could hardly occur which could not be decided, if the claim turned merely upon the question of priority. It seems, however, from an English case,