

back to some one who could lawfully sell it to him for use during the former term.¹ In the other it was held that, if he does show a right to use the machine, derived during the original term from some one who could then lawfully impart to him that right, he may continue to use it after any and every extension of the

only had ceased, and would be disappointed and exposed to loss if it was again renewed, and at the same time had overlooked the class who, in addition to the expense and change of business, had bought the right from the patentee, and were in the use and enjoyment of the machine, or whatever it might be, at the time of the renewal. These provisions are in juxtaposition, and we think are but parts of the same policy, looking to the protection of individual citizens from any wrong and injustice on account of the operation of the new grant.

“The consequences of any different construction than the one proposed to be given are always to be regarded by courts, when dealing with a statute of doubtful meaning. For between two different interpretations, resting upon judicial expositions of ambiguous and involved phraseology, that which will result in what may be regarded as coming nearest to the intention of the legislature should be preferred.

“We must remember, too, that we are not dealing with the decision of the particular case before us, though that is involved in the inquiry, but with a general system of great practical interest to the country; and it is the effect of our decision upon the operation of the system that gives to it its chief importance.

“The eighteenth section authorizes the renewal of patents in all cases where the board of commissioners is satisfied of the usefulness of the invention, and of the inadequacy of remuneration to the patentee. Inventions of merit only are the subject of the new grant, — such as have had the public confidence, and which it may be presumed have entered largely, in one way and another, into the business affairs of life.

“By the report of the commissioner of patents, it appears that five hundred and two patents were issued in the year 1844, — for the last fourteen years the average issue yearly exceeded this number, — and embrace articles to be found in common use in every department of labor or art, on the farm, in the workshop and factory. These articles have been purchased from the patentee, and have gone into common use. But if the construction against which we have been contending should prevail, the moment the patent of either article is renewed, the common use is arrested by the exclusive grant to the patentee. It is true the owner may repurchase the right to use, and doubtless would be compelled from necessity; but he is left to the discretion or caprice of the patentee. A construction leading to such consequences, and fraught with such unmixed evil, we must be satisfied was never contemplated by Congress, and should not be adopted unless compelled by the most express and positive language of the statute.”

¹ *Chaffee v. Boston Belting Co.*, 22 How. 217.

patent subsequently obtained, as long as it lasts, and may even repair it.¹

§ 199 *a*. This doctrine has been confirmed by recent decisions, in which it has been held that the right to use the specific machine is guaranteed by section eighteen of the act of 1836. A purchaser may use the identical machine as long as it lasts, and may repair it after an extension of the patent.²

§ 200. This course of decisions, then, establishes a distinction, in respect to the right of previous assignees, between the right to *make and vend* the patented article, and the right to *use* it, after an extension. The former, it is held, is a part of the franchise which the patent confers, and the right to exercise that franchise after an extension ceases in the previous assignee, unless there is a stipulation to the contrary. The latter, it is said, is the acquisition of a right which takes the patented article out of the monopoly of the patent, makes it the property of the individual purchaser, and removes it from the protection of the patent laws.

§ 201. It may be observed, here, that four of the cases above cited related to *machines* licensed or authorized under a former term of the patent. A difficulty will be experienced when it becomes necessary to apply the same doctrines to patents embracing other subjects; for the question will then arise whether the clause in the act of 1836, saving the rights of assignees, applies at all to

¹ *Bloomer v. Millingen*, 1 Wallace, 340. There is a case, decided on the circuit by Mr. Justice Nelson, in 1855 (prior to *Chaffee v. Bost. Belt. Co.*, *ante*), in which a distinction is drawn between the rights of a purchaser who bought a machine from the patentee himself, who had built it for him, and the case of a purchaser of a machine from one holding a license to make and sell under the first term of the patent; and it is intimated that, in the former case, a special act of Congress extending the patent could not take away the right to use the machine sold by the patentee, even if it should undertake to do so. Without going into the consideration of this last suggestion, it may be observed that the course of decisions in the Supreme Court makes no such distinction as to the source from which the right to use was derived during a former term, but merely requires that the use in its inception should be lawful, or be conferred by some one who then had the right to confer it. The case referred to is *Blanchard v. Whitney*, 3 Blatchf. 307. The effect of the eighteenth section of the statute of 1836 is not adverted to in this case, and the right of the vendee of the machine is put upon the ground that by the sale the patentee conveyed an unlimited right to use it until worn out.

² *Farrington v. Board of Water Commissioners*, 4 Fisher's Pat. Cas. 216; *Hawley v. Mitchell*, *ibid.* 388; *Tilghman v. Mitchell*, *ibid.* 615.

such patents, and if so, in what way. Thus, for example, to take the case of a patented process of manufacture, resulting in a new article of commerce, such as that suggested by Mr. Webster, of a patent starch. The patent monopoly, in such a case, embraces the right to make, the right to use, and the right to vend to others to use. While, then, it may be conceded that the sale of the particular kind of starch by the patentee, during a former term, carries to the purchaser of the starch the right to consume it or to vend it as an article of commerce after an extension, is this all the application of the clause protecting the rights of assignees or grantees that can be given to such a case? Is the former assignee or grantee of a right to practise the patented process excluded from the clause? What is "the extent of his interest therein," in relation to the extended term of the monopoly? What, in other words, is "the right to use the thing patented," which the statute saves to an assignee after an extension, according to the extent of "his interest therein," in a case of this description?

§ 202. It has been suggested that this clause in the statute applies only to patented machines. But there appears to be nothing in the terms or nature of the provision which limits it to patents of a particular class. All that can be said at present is, that the Supreme Court have been called upon, as yet, to apply it only to patents for machines, and that they have given it a construction which cuts the knot of certain difficulties which arise in that direction. If, in so doing, embarrassments have been created in its application to patents of another kind, they can be solved only when the cases arise.¹

§ 203. The doctrine, then, as it now stands, in relation to the rights of assignees, or purchasers under a former term, is that, in the absence of an express stipulation, mere assignees of the right to make and vend (a patented machine), who acquired their right under a former term, take nothing under an extension, whether the extension was obtained under the standing law or under a special law; but that purchasers of the patented machine, who derived from a competent source a lawful right to use it, can con-

¹ See the close of the opinion of the court in *Chaffee v. Bost. Belt. Co.*, 22 Howard. See also the case of *Day v. The Union India-Rubber Company*, 3 Blatchf. 488; and *Wood v. Michigan Southern R.R.* (1868), 3 Fisher's Pat. Cas. 464.

tinue to use it until it is worn out, or as long as it can be repaired.¹ It becomes important, then, to know what will operate as a stipu-

¹ The point still remains undecided by the Supreme Court whether an assignee or licensee of the right to use the thing patented is confined, after an extension, to the use of the identical machine or apparatus which was in existence in his hands at the time of the extension. All the decisions, thus far, involved as the point for judicial determination the right to use a machine constructed before the extension of the patent; and in dealing with these cases, the Supreme Court has been led (as in *Wilson v. Simpson*, 9 How. 109) into some rather subtle distinctions between repairs or reconstructions which do not, and those which do, change the identity of the machine which had become the property of the assignee or grantee before the extension. It will be seen, on examining these cases, that the construction given to the clause of the eighteenth section of the act of 1836 rests mainly upon the position that a sale of a patented machine takes *that machine* out of the monopoly, and puts it upon the same footing in the hands of the purchaser with all other property. But this carries no right to construct another machine like it; and hence, so long as the operation of the clause in question is governed by the unquestionable truth that the *machine sold* became the absolute property of the grantee, it may be necessary to go into nice inquiries respecting the identity of the machine which the grantee is using and the machine which was sold or licensed to him. But there may be cases where this basis of the construction of the statute will furnish no guide whatever. Take the case of a mixed patent, where the thing patented embraces a process which can be exercised only by machinery described in or perhaps covered by the patent. Or take the case of a patent for a process alone, but one requiring the use of a peculiar apparatus, which may not itself be covered by the patent. Is the grantee of "the thing patented" confined in such cases to the use of the identical apparatus which he was using at the time of the extension? Or is the grantee of "the thing patented," where that thing is nothing but a machine, confined to the identical machine which he had bought or been licensed to use before the extension? These inquiries show that the construction heretofore given to the statute has, perhaps, been narrowed rather more than was needful, and that the fact that a particular structure has become the property of the grantee is not alone a sufficient basis for the construction, as it obviously will not satisfy all cases. The necessity for a broader construction of the statute will be seen by examining the case of *Day v. The Union India-Rubber Company*, 3 Blatchf. 488, decided by Judge Hall, in which he entered into an elaborate examination of all the cases that had been decided by the Supreme Court, and held, that whatever was the tendency of the reasonings employed in them, they had judicially decided nothing more than the point, that where the defendant is using the same machine which he was licensed to use before the extension, he may continue to use and even repair *that machine*. The learned judge, therefore, felt himself at liberty to examine and decide the further case of the use of a thing patented, whether the particular apparatus was or was not in existence prior to the extension. The thing patented in this case was a subject in which a process

lation *inter partes*, that assignees or grantees of the right to exercise the patent monopoly shall continue to have the same right in future terms ; and what, if any, are the rules of construction applicable to such instruments in the determination of this question ?

§ 204. In the case of *Wilson v. Rousseau*, there was a covenant that any "renewal" of the patent should "enure to the benefit" of the assignee. At the time of making this covenant, there was no standing law of the United States providing for an extension of the term beyond the fourteen years expressed in the patent. Nor was there, at that time, any law providing for a surrender and reissue, on account of a defective specification ; but a decision had been made in the Circuit Court for the New York circuit, to the effect that, upon general principles, such a surrender and reissue might be made. This was the state of the law, statutory or declared, at the time of this covenant respecting "any renewal." A majority of the Supreme Court held that the parties to the covenant were to be presumed to have made it "with a reference to the known and existing rights and privileges secured to patentees under the general system of the government established for that purpose" ; that this, at the time, embraced a right to take out a new patent for the residue of the unexpired term

and machinery for working the process were so blended that it was doubtful whether the patent covered the one or the other, or both. The learned judge held, that whether the patent covered a process or a machine, or both, and whether the machinery used by the defendant was or was not in existence prior to the extension of the patent, the eighteenth section of the statute gave him, as grantee "of the right to use the thing patented," the same rights of use after the extension that he held before. The opinion pronounced is highly instructive and able. The case was taken to the Supreme Court, but was decided there upon other grounds. See *Day v. Union India-Rub. Co.*, 20 How. 216. It was followed by the cases of *Chaffee v. Bost. Belt. Co.*, and *Bloomer v. Millingen*; but these did not involve any thing beyond the points previously decided as to the use of the identical machine sold or licensed before the extension. The whole subject needs further examination. For the convenience of the reader the cases are here cited in their chronological order: *Wilson v. Rousseau*, 4 How. 646 (1845); *Simpson v. Wilson*, 4 How. 709 (1845); *Wilson v. Simpson*, 9 How. 109 (1849); *Bloomer v. McQuewan*, 14 How. 539 (1852); *Day v. The Union India-Rub. Co.*, 3 Blatchf. 488 (1856); *Hartshorn v. Day*, 19 How. 211 (1856); *Day v. Union India-Rub. Co.*, 20 How. 216 (1857); *Chaffee v. Bost. Belt. Co.*, 22 How. 217 (1859); *Bloomer v. Millingen*, 1 Wallace, 340 (1863).

of fourteen years ; and that the term “renewal” was to be satisfied with reference to this new patent so to be obtained, and was not to be construed to embrace a renewal to be created by further legislation of Congress.¹ It may admit of some question whether a narrower construction of the term “renewal,” than it might have received under the principle of construction adopted, was not resorted to in this case. Assuming the correctness of the principle, that parties, in making such a covenant, are presumed to contemplate such rights and privileges as the existing patent system itself contemplates, it is to be observed, that, at the time of this covenant, the practice of obtaining extensions by special act of Congress had long been known ; and that, although there was no standing law for that purpose, there was also no standing law for obtaining what the court called a new patent, by surrender and reissue of the old one.

§ 205. The utmost that existed on this subject was embraced in a decision of a Circuit Court that a patent might be surrendered and reissued, and the possibility that the Supreme Court might, as they afterwards did, sanction this ruling. So far, therefore, as the meaning of the term “renewal” could be gathered from what might be brought into existence thereafter, it would seem that a future extension by subsequent legislation was as fairly within that meaning as the new patent to be obtained for the residue of fourteen years, by a surrender and reissue under the sanction of a judicial decision. But the principle of construction appears of itself to have been sound, namely, that when parties use such a term as the “renewal” of the patent, they are to be supposed to embrace what the law provides as a “renewal.” Fortunately, the subsequent legislation fixes the meaning of this term as referring to what is also called an “extension.” Thus, while the thirteenth section of the act of 1836 speaks of a reissued patent as a “*new* patent,” it does not denominate the term a “renewal” ; but the eighteenth section, which provided for extensions by the commissioner, describes the further term so obtained by both the terms “extension” and “renewal.” Accordingly, it has been held, that where the term “renewal” or “renewed letters-patent” was used in an agreement made while the eighteenth section of the

¹ Wilson v. Rousseau, 4 How. 646.

act of 1836 was in force, the parties are to be deemed to have had in view an extension under that section.¹

§ 206. What then, it may be asked, will be the rights of an assignee or covenantee, under the use of the term "renewal" or "renewed letters-patent," in respect to the new patent obtained by a surrender and reissue, or in respect to an extension obtained by a special law, and not under a standing law? Are these to be excluded by construction from the operation of the covenant? To this it may be answered, in the first place, that, in respect to a patent reissued on account of a defective specification, the question may be practically unimportant, if the contract is a clear assignment of an interest in the existing patent; because the reissued patent, being, in contemplation of law, the same as the original, the law annexes the right to it to the interest obtained by the assignee under the original. But in respect to extended terms that may be obtained by special laws, aside from, or in the absence of, any standing law providing for such further grants, the context of the instrument under which the assignee or covenantee claims, construed by the application of certain established principles respecting this species of property, must determine what the party is to take. The question is chiefly, if not solely, a question of intent. These instruments are, of course, framed in a great variety of forms, and the language used is to be applied to the subject-matter about which the parties appear to have dealt.

§ 207. There is nothing in the nature of a future contingent interest in a patent, whether it may be obtained under a standing or under a special law, to prevent it from being a subject of bargain and sale. It is clear that the inchoate right to obtain an extension under a standing law may be conveyed or controlled in advance by the party who has the power to obtain and make it perfect; and it seems to be equally clear that an inventor, either before or after he has obtained one patent, may so deal with the possibility of obtaining future patents on his invention, as to vest an interest in such future patents in his assignee or grantee. The question in either case will be, whether he has conveyed or covenanted to convey a future contingent interest.

§ 208. In deciding such a question, it has been considered that a sale of the "invention" does not necessarily carry with it the ex-

¹ *Pitts v. Hall*, 3 Blatchf. 201.

clusive right for an extended term, obtained under the standing law; for this right is not a mere incident to the invention, but its existence is made to depend, not only on matter subsequent to the invention, but exclusively personal to the inventor himself, and only he or his personal representatives can obtain it.¹ But is there, then, any presumption capable of being applied to such a sale, which should exert a controlling influence upon the operation that is to be given to it? It is, on the one hand, the well-settled doctrine in relation to the act of 1836, that the extended term therein provided for was intended as a reward to an inventor who had failed to obtain an adequate remuneration for his invention during the first term; that the right to obtain it is an inchoate right, which belongs solely to the inventor or to his personal representatives; and these considerations undoubtedly had a large influence in causing the strict construction that was given in the case of *Wilson v. Rousseau*, to the clause in that act which concerned the rights of assignees. So far, therefore, as the legitimate influence of this policy of the law can extend, in the construction of a contract of sale of the invention, it should undoubtedly be held, that unless an intention to convey something beyond the first term can be found in the instrument, the assignee should not be held to take any thing beyond that term. On the other hand, while a sale of the "invention," made during or before the first or original term, may not of itself evince an intention to convey more than that term, it is quite consistent with such an intention; and if that intention can be gathered from the whole instrument, it will operate, not so much by reason of any superior force in the term "invention," as by other clauses which point to the extent and duration of the interest which was designed to be vested in the grantee.²

§ 208 *a.* Where a license was granted "for and during the term for which said letters-patent are or may be granted," it was held that there was nothing in this language to indicate that the parties had in view a continuance of the license during any extended term of the patent, but that it applied only to a reissue."³

¹ *Clum v. Brewer*, 2 Curtis, C. C. R. 506.

² *Ibid.*

³ *Hodge v. Hudson River & Harlem R.R. Cos.* (1868), 3 Fisher's Pat. Cas. 410; s. c. 6 Blatchf. 85; also, 165. In this case Judge Blatchford said: "As to the duration of the license, nothing is said in the license about

§ 208 *b*. And so where the assignment granted all the right, title, and interest of the patentee to be held and enjoyed by the assignee

an extension of the patent. The license is to continue 'for and during the term for which said letters-patent are or may be granted.' The first question that arises is as to the meaning of these words 'may be'; and whether they refer to or can be construed to include an extended term of the patent. I do not think there is any thing in the license to indicate that the parties to it had at all in view a continuance of the license during any extended term of the patent. The provision that the license is to continue 'during the term for which said letters-patent are or may be granted,' is satisfied by holding it to apply exclusively to a reissue of the patent. There is nothing in the language which makes it exclusively or even necessarily applicable to an extension. The presumption of law in regard to every license under a patent is that the parties deal in regard only to the term existing when the license is given, unless an express provision is inserted, looking to a further interest. *Wilson v. Rousseau*, 4 How. 646, 685, 686. Unless there be such a stipulation showing that the parties contemplated an extension, the court is bound to construe the instrument, and each and all of its provisions, as relating to the existing term only. *Gibson v. Cook*, 2 Blatchf. C. C. R. 144, 146. The language of the license in the present case is very different from the language of the instrument in the case of *Phelps v. Comstock*, 4 McLean, 353. In that case, the language was: 'to the full end of the term or terms for which letters-patent are or may be granted for said improvements.' The court held that that language embraced any subsequent extension of the patent. So, also, in *Case v. Redfield*, 4 McLean, 526, where the court held that the language of the instrument embraced an extension, the language was, 'all the right, title, and interest . . . in said invention and improvement, as secured . . . by said letters-patent for the whole of the United States . . . for which letters-patent were or may be granted for said improvement.' In *Clum v. Brewer*, 2 Curtis, C. C. R. 506, 508, where the court held that the parties intended to cover an interest in an extension, the language was, 'one undivided fourth part of my said invention, and of all my right and property therein, secured by my said *caveat* or otherwise, that I have or may have from any letters-patent for the same, granted by the government of the United States, and within the limits thereof.' In *Pitts v. Hall*, 3 Blatchf. C. C. R. 201, where the court held that there was no doubt that the parties intended, by the language used, to refer to and provide for an extension, the language to that effect was clear and unambiguous. In all forms of the cases referred to, the instrument under consideration was one purporting to convey, by assignment or grant, an interest in the invention patented, and an interest in the entire right granted by the existing patent to make and use, and vend to others to be used, the invention patented. As Mr. Justice Curtis says, in *Clum v. Brewer*, p. 521: 'Where the invention is the subject sold, it would be natural to expect to find in the instrument of sale something showing an intention that the purchaser should be interested not merely in the original letters-patent, but in any extension thereof securing the exclusive right to the same invention which was the sub-

“to the full end of the term for which the said letters-patent are or may be granted,” it was held that the words “may be granted” might pass a subsequent reissue of the patent for the residue of the original term, but could not be construed as including an extended term. In this case the court remarked that “the words ‘may be granted’ are the only ones in the whole instrument that can possibly be thought to point to an extension that might subsequently be acquired. But they must be read in connection with, and subordination to the rest of the instrument; and this very clause refers to ‘the term for which the said letters-patent,’ &c.; a single term is referred to, and the said letters-patent. The reference is in terms to the term and the letters-patent already mentioned. The phrase ‘may be granted’ seems to be an expression loosely used, and without any definite meaning in the connection in which it is found, unless it refers to other reissues of patents covering the remainder of said term. There had already been one reissue, and the facts show that a second reissue was had for the remainder of the term after this assignment, doubtless to cover some defect. These reissues are authorized by the act of Congress, and often occur. In a certain sense, when the patents thus originally issued are surrendered and others issued in their place, the whole may be regarded as the same letters-patent: they cover the same term. The reissued patent covers no improvement or extension, but is intended to rectify some error, or remedy some defect, and accomplish the

ject of the sale.’ In the present case, neither the invention nor any interest in it, nor any interest in the entire right covered by the patent, was granted, but merely a license to use the invention, and to construct brakes containing it for such use, on certain cars on a certain railroad, and such license is to continue during the term for which said letters-patent are or may be granted.’ The term for which said letters-patent, that is, the letters-patent granted October 2, 1849, and reissued March 1, 1853, were granted or might be granted, was a term ending October 2, 1863. It is impossible, on any fair construction of the language, and in view of the adjudged cases, to hold that the license was intended by the parties to cover an extended term of the patent. There being, then, in this case, no express stipulation, carrying the license into the extended term, the only right which the Hudson River Railroad Company possesses, under the extended term, is that which is given to it by the clause of section 18 of the act of July 4, 1836, 5 U. S. Stat. at Large, 125, which provides that the benefit of the extension of a patent shall ‘extend to assignees and grantees of the right to use the thing patented to the extent of their respective interest therein.’ ”

identical object intended to be accomplished by the letters originally issued. In this sense, they are substantially the same letters-patent. In this view, the words 'may be granted' may have some significance as used in this instrument, and they are satisfied by applying them to any further letters-patent that might be issued for the same term, and to accomplish the same objects intended by those already issued. And in this instance there was a subsequent reissue, for the remainder of the term to which they might in fact apply. But upon a view of the whole instrument, to construe them as referring to a new term, and letters-patent not yet *in esse*, would be doing great violence to the language. I have found no authority to justify such a construction." ¹

§ 208 *c*. In the case of *Railroad Company v. Trimble*,² decided by the Supreme Court of the United States in 1870, it appeared that one Howe, having obtained in 1840 letters-patent for an improvement in the manner of constructing the truss frame of bridges, granted all his interest therein for certain States to Isaac R. Trimble, by a deed dated July 9, 1844, which was duly recorded. This assignment conveyed the rights of Howe in these words: "All the right, title, and interest which I have in said invention, as secured to me by said letters-patent; and also all right, title, and interest which may be secured to me for alterations and improvements in the same from time to time; . . . the same to be held and enjoyed by the said Trimble, &c., to the full end of the term for which said letters-patent are or may be granted, as fully and entirely as the same would have been held and enjoyed by me, had this assignment and sale not have been made."

On the 28th of August, 1846, another patent was granted to Howe for an improvement in the manner of constructing these truss frames; and on the 18th of September, 1854, after the death of Howe, his administrator, in order to "secure to I. R. Trimble more perfectly his legal rights, and tend to a more speedy adjustment of any disputed claim," executed in favor of Trimble an assignment of the same interest in the patent of 1846 that he held in the others. On the application of the same administrator, the patent of 1846 was extended for seven years from August 28th, 1860. The Philadelphia, Wilmington, and Baltimore Railroad

¹ *Jenkins v. Nicolson Pavement Co.* (1870), 1 Abbott's U. S. Reports, 567, Sawyer, J.

² 10 Wall. 367.

Company having infringed the patent for this improvement, during the term of the extension, a suit for damages was brought, and the issue was raised whether the assignment of July 9, 1844, from Howe to Trimble, vested in the latter an interest in the extension of the patent of 1846.

In passing upon this question, the Supreme Court held that the language employed in the assignment included alike all the patents which had been issued, and all which might be issued to the patentee for the inventions referred to, whether reissues, renewals, or extensions. "The language employed," said Mr. Justice Swayne, "is very broad. It includes alike the patents which *had been* issued, and all which might be issued thereafter. No discrimination is made between those for the original inventions and those for alterations and improvements, nor between those which were first issues and those which were reissues or renewals and extensions. The entire inventions and all alterations and improvements, and all patents relating thereto, whenever issued, to the extent of the territory specified, are within the scope of the terms employed. No other construction will satisfy them. Upon the fullest consideration we have no doubt such was the meaning and intent of the parties."

The judges were further of opinion that this case came directly within the principles of law laid down in *Gaylor v. Wilder*, and that the assignment by Howe of the extension of his patent, before any extension had issued, vested in the assignee, Trimble, the legal as well as the equitable title in both the original patent and the extension. In the language of the court: "The rule laid down [in *Gaylor v. Wilder*] is the law of this tribunal upon the subject. There the patent was an original one, here it is an extension. The question before us arises under the eleventh and eighteenth sections of the act of 1836. But the arguments which controlled the decision in that case apply in this with equal force. The same considerations are involved in both. There is no substantial ground of distinction. The application of the same principle to the assignment of an extended patent, made before the extension, is an inevitable corollary, from the reasoning and ruling of the court. Without, in effect, overruling that adjudication, we cannot hold that Trimble had not a legal title under the extended as well as under the original patent. In our judgment he had such a title.

“In this connection our attention has been called by the counsel for the plaintiffs in error to *Wilson v. Rousseau*, and several other cases. None of them turned upon the question we have been considering, and neither of them contains any thing in conflict with the proposition established by *Gaylor v. Wilder*.”¹

§ 208 *d*. Prior to the statute of 1870, it seems to have been the practice of the Patent Office to grant reissues to assignees of the whole patent, without requiring the original patentee to join in the surrender of the patent and the application for a reissue; and

¹ *Railroad Company v. Trimble*, 10 Wall. 367. Mr. Justice Bradley dissented, on the ground that the language in the assignment by Howe to Trimble was not sufficient to show that a transfer of the extension was intended.

In applying the principles of *Gaylor v. Wilder* to this case, Mr. Justice Swayne, who delivered the judgment of the court, said: “The effect of such a contract, we think, has been settled by this court in *Gaylor v. Wilder* and others. Fitzgerald, the inventor, before the patent was issued, assigned his entire right to Enos Wilder. The assignment contained a request that the patent should be issued to the assignee, and was duly recorded in the Patent Office. This brought the case within the terms of the sixth section of the act of 1836. Fitzgerald made no assignment after the patent was issued to him. Enos Wilder, his assignee, assigned to Benjamin Wilder, who was the plaintiff in the action. The defendants insisted that Enos Wilder had not the legal, but only an equitable title. Upon the question, whether an assignment subsequent to the issuing of the patent was necessary to pass the former to the assignee, this court said: ‘We do not think the act of Congress requires it, but that when the patent issued to Fitzgerald, the legal right to the monopoly and the property it created was, by the operation of the assignment then on record, vested in Wilder.’ The argument which controlled the judgment of the court may be thus stated: Fitzgerald had an inchoate right at the time of the assignment, the invention being then complete and the specification prepared. It appeared, by the language of the assignment, that it was intended to operate upon the perfect legal title, which he then had a lawful right to obtain, as well as upon the inchoate right which he then possessed. There was no sound reason for defeating the intention of the parties by restricting the assignment to the latter interest, and compelling the parties to execute another transfer, unless the act of Congress required it, which, in the opinion of the court, it did not. The act of 1836 declares that every patent shall be assignable to law. The thing to be assigned is not the mere parchment on which the grant is written, but the monopoly which the grant confers, — the right of property which it creates. And when the party has acquired an inchoate right to it, and the power to make that right perfect and absolute at his pleasure, the assignment of his whole interest, whether executed before or after the patent issued, is equally within the provisions of the act of Congress. We concur in these views. The rule laid down is the law of this tribunal upon the subject.”

the courts have held such reissues to be valid. When this point was under consideration in the case of *Swift v. Whisen*,¹ Judge Leavitt remarked that “until the Supreme Court of the United States shall have had this point before them, and shall have decided adversely to the usage and practice of the Patent Office, and the views to which I have referred, I shall feel compelled to regard the statute as authorizing a reissue to an assignee of an assignee, and that without the consent, or approbation, or knowledge of the original patentee. . . . There does seem to me some inconsistency in requiring the assignee, in sustaining his application for a reissue, to go before the commissioner and to make oath in regard to the invention covered by the reissue, and to show that it is the same invention covered by the original patent. But, as I said before, there is no prohibition in the statute to this effect, and as there are no judicial decisions to the contrary, and as it has been the uniform usage of the Patent Office to grant reissues under these circumstances, the court would not now feel authorized to say that the patent in question, the patent upon which you are to pass, is invalid upon the ground referred to.”

§ 208 *e*. The law on this point, however, has been regulated by the statute of 1870.² Section thirty-three of that act provides “that patents may be granted and issued or reissued to the assignee of the inventor or discoverer, the assignment thereof being first entered of record in the Patent Office; but in such case the applicant for the patent shall be made, and the specification sworn to, by the inventor or discoverer; and also, if he be living, in case of an application for reissue.” By a subsequent act³ it was declared that the provisions of this section should not be construed to apply to patents issued and assigned prior to July 8, 1870.

§ 208 *f*. In the case of the *Commissioner of Patents v. Whiteley*,⁴ decided by the Supreme Court of the United States in 1866, the very important question was raised, whether the grantee of an exclusive territorial interest in a patent has the legal right to apply for a reissue. The defendant in error, in this case, was the assignee of the entire rights of the patentee in all the territory embraced in the patent, except the State of Ohio and a portion of Illinois; and without joining the other assignees

¹ (1867), 3 Fisher's Pat. Cas. 343.

³ March 3, 1871.

² See Appendix.

⁴ 4 Wall. 522.

in the application, applied to the commissioner of patents for a reissue, according to the thirteenth section of the act of 1836. The commissioner refused to consider this application, on the ground, that the applicant, not being the assignee of the whole interest in the patent, was not entitled to the reissue asked for. It is to be regretted that this important question, thus passed upon by the commissioner, was not determined by the highest judicial tribunal known to our law. The court only remarked, that it was not before them for consideration, and added: "If it were, as at present advised, we are not prepared to say that the decision of the commissioner was not correct."

§ 209. The conclusion to which the cases as well as sound principle leads is this, that the only presumption applicable to contracts for the sale of a patent interest is that the parties dealt for the existing term, unless a provision was inserted in the grant or assignment looking to a further interest.¹

§ 210. There is one other mode in which the interests of an assignee may be affected by the act of the patentee, and that is by a disclaimer. When a disclaimer is filed under the seventh and ninth sections of the act of 1837, an assignee of the whole patent is the proper party to file it; and it has been held, that, if the patent had been previously assigned in part, the disclaimer will not operate to the benefit of the assignee, in any suit brought by him, either at law or in equity, unless he joined in the disclaimer.²

§ 211. We now come to that other class of contracts made by patentees, which, not being assignments, confer upon another the right to exercise in some way the privileges secured by the patent, — contracts which are popularly as well as technically known as licenses. The distinction between an assignment and a license, under our patent laws, relates to the interest in the patent, as distinguished from a mere right to use the thing patented or to practise the invention. An assignment, whether of the whole or of an undivided part of the whole patent, of the exclusive right within a particular district, necessarily operates to diminish *pro tanto* the interest of the patentee. But a license is a grant or permission to practise the invention or to use the thing patented,

¹ Gibson v. Cooke, 2 Blatchf. 144.

² Wyeth v. Stone, 1 Story's R. 273.

which leaves the interest of the patentee just as extensive as it was before. Thus, when a patentee sells to another a patented machine made by himself, or permits another to make the machine, without making the permission exclusive as to any particular territory, the party thus authorized becomes a licensee, and does not acquire the rights and position of an assignee. Such a party has no part of the legal estate; he cannot authorize others to make the machine; nor does the permission extended to him diminish in any degree the power of the patentee to make, or to authorize others to make, the patented machine. So, also, where the subject of the patent is a compound or composition of matter, if the patentee authorizes another to make and sell the article, the party so authorized becomes a licensee, but he has no interest in the patent, and no power to grant to others any portion of the exclusive right of making the thing, which is vested in the patentee.¹ Upon this distinction it follows that a license does not require to be recorded, and that suits for infringement cannot be brought in the name of the licensee, but must be brought in the name of the patentee or other person holding the legal title; for an assignee may sue in his own name, because he holds the entire and unqualified interest which the suit is to vindicate.²

§ 212. If, then, an instrument vests in the grantee the exclusive right, either for the whole country, or for a particular district, of making and using the thing patented, and of granting that right to others, it is an assignment. The entire monopoly secured by the patent, for the whole country or for a particular district, must be embraced by an instrument which is to operate as an assignment. Any conveyance short of this is a license.³ If the patentee has seen fit to limit the extent of the monopoly, as by limiting the number of machines which his grantee may build and use in the particular district, the instrument may still be an assignment, provided it vests in the assignee the whole of the exclusive right so limited, including the right to grant to others the right to build and use any of the limited number of machines. But an exclusive license is no more than a common license, unless it vests

¹ *Brooks v. Byam*, 2 Story's R. 525, 538, 539, 542.

² *Gaylor v. Wilder*, 10 How. 477.

³ *Ibid.*; *Blanchard v. Eldredge*, 1 J. W. Wallace, 337; *Brooks v. Byam*, 2 Story, 525; *Protheroe v. May*, 1 Webs. Pat. Cas. 445; s. c. 5 Mees. & Welsb. 675; *Woodworth v. Wilson*, 4 How. 712.

in the licensee a right to grant to others the right to make and use the thing patented.¹

§ 212 *a*. Where the patentee had transferred all his right, title, and interest in certain letters-patent, embracing all future terms and improvements, to the assignee “to manufacture and sell the same within the States of New York and Connecticut,” it was contended on behalf of the defendants that this instrument was not an assignment of the whole or of an undivided part of the patent.² It was held by the court, however, that such an instrument, if not technically an assignment of the patent, or an undivided part thereof, was a grant of the exclusive right under the patent to use, and to grant to others to make and use, the thing patented within the limits specified, and was sufficient to warrant a suit in the name of the assignee for an infringement within the territory named. The effect of this instrument was thus discussed by Mr. Justice Woodruff, who delivered the opinion of the court: “Although the instrument does not employ the terms ‘to grant to others to make and use’ the invention, &c., I think its just construction fully excludes the patentee from all interest in, or control over, the invention, or the manufacture or use of the thing patented, within the specified territory, and so excludes him from any right to confer the privilege upon any others. He assigns all his right, title, and interest in the invention, improvement, or patent, within and throughout the two States mentioned, for the term of the patent, and the terms of any patent for the same or other improvements thereof, or any extensions for or of either thereof, which might be granted to the assignor, or his heirs, executors, administrators, or assigns, to manufacture and sell the same within the States of New York and Connecticut. This transfers the whole interest of the patentee in those States; and the concluding words of the granting clause do not restrict the grantees to the manufacture in their own persons. They are descriptive of the future and other improvements and extensions which might thereafter be granted to the patentee, to manufacture and sell in New York and Connecticut, and are not limitations or qualifications of the full right, title, and interest in the invention and its use, previously therein granted. That the as-

¹ *Gaylor v. Wilder*, 10 How. 477; *Woodworth v. Wilson*, 4 How. 712; *Protheroe v. May*, 1 Webs. Pat. Cas. 445; *Ritter v. Serrell*, 2 Blatchf. 379.

² *Perry v. Corning* (1870), 7 Blatchf. 195.

signment gave to Treadwell and Perry the entire monopoly which the patentee had in those States, and to the exclusion of the patentee himself, is, I think, quite certain; and this is made the test of the right to sue, in *Gaylor v. Wilder*, by Chief Justice Taney.”

§ 212 *b*. In *Hussey v. Whitely* it appeared that the complainant by a written instrument had granted the exclusive right to make and sell his improved reaping and mowing machine during the continuance of his patent in twenty-three counties of Ohio, including that in which the defendant's factory was carried on. The consideration was to be ten dollars for each machine made and sold by the licensees; but the plaintiff expressly reserved the right of sending machines of his own manufacture into the territory embraced in the contract. This was held to be not an assignment of the interest of Hussey in the patent within the territory named, but a mere license; and the complainant, as a “party aggrieved,” under section seventeen of the act of 1836, had a remedy in chancery for infringement without joining the licensees above-mentioned as parties complainant.¹

§ 213. A license, being an authority to exercise some of the privileges secured by the patent, but which still leaves an interest in the monopoly in the patentee, the first question that arises is, whether it is assignable. This quality is inherent in an assignment, but whether it belongs to a license depends on the terms of the instrument. A mere license to a party, without mentioning his *assigns*, is a grant of a power, or a dispensation with a right or a remedy, and confers a personal right upon the licensee, which is not transmissible to another person. It seems, however, that the use of the word “assigns” in the granting part of a license will not necessarily operate to make it assignable, when, from the tenor of the whole instrument, it appears to have been intended as a personal privilege.² But whether a license is assignable or not, as to the entirety of the privilege, it is still more questionable whether it is apportionable, so as to permit the licensee to grant to others rights to work the patent, by subdividing the rights that may have been granted to himself.

§ 214. This question arose in a case where the patentee of friction matches granted to another the right to make, use, and sell

¹ *Hussey v. Whitely* (1860), 2 Fisher's Pat. Cas. 120.

² *Brooks v. Byam*, 2 Story's R. 525.

the friction matches, and “to have and to hold the right and privilege of manufacturing the said matches, and to employ in and about the same six persons and no more, and to vend the said matches in the United States.” The licensee afterwards undertook to sell and convey to a third person “a right of manufacturing friction matches, according to letters-patent, &c., in said town of A., to the amount of *one right*, embracing one person only, so denominated, in as full and ample a manner to the extension (extent) of the said one right, as the original patentee.” Mr. Justice Story held that every conveyance of this sort must be construed according to its own terms and objects, in order to ascertain the true intent and meaning of the parties; and that, in this case, the interest under the license was an entirety, incapable of being split up into distinct rights, each of which could be assigned to different persons in severalty.¹

§ 215. The relations of a licensee to the patentee, in respect to the validity and scope of the patent, involve an inquiry into the terms of the license. The taking of a naked license, or permission to work under a patent, does not, without some recitals or covenants amounting to an admission, estop the licensee from denying the validity of the patent, or the fact that he has used the patented thing or process, if he is subsequently proceeded against for infringement. It is necessary to look into the instrument, and to ascertain that there are recitals or covenants which will deprive a licensee of the defences to which all other persons may resort. If, by his agreement, the licensee has admitted that the process or thing which he uses is the patented process or thing, and he is afterwards proceeded against for not complying with the terms of his agreement, he will not be permitted to show that he did not use that patented thing or process.² So, too, if the deed contain recitals or statements amounting to an admission of the validity of the patent, either as to the novelty or utility of the supposed invention, or the sufficiency of the specification, the licensee will be estopped in an action of covenant for the rent or license dues, to deny the validity of the patent, by setting up any thing contrary to the admissions in the deed.³ But if the

¹ Brooks v. Byam, 2 Story's R. 525.

² Baird v. Neilson, 8 Cl. & Fin. 726.

³ Bowman v. Taylor, 2 Ad. & El. 278; Jones v. Lees, 38 Eng. L. & Eq. R. 318.

patentee join issue upon an allegation made by a licensee contrary to an admission in his deed, instead of pleading the estoppel, the deed will be evidence for the patentee, but will not, as evidence, be conclusive.¹

§ 216. It has also been held that a licensee, who has paid an annuity in consideration of a license to use a patent privilege, which he has had the benefit of, cannot recover back the money he has paid, upon the ground of the invalidity of the patent, in an action for money had and received.² This is upon the ground that the licensee has had the benefit of what he stipulated for, and also upon the ground that the consideration is not divisible. But another question arises where there are periodical payments reserved by a license, and after some payments have been made, and while others remain to be made, the patent turns out to be invalid. In such a case, is there an estoppel growing out of the mere fact that the licensee has dealt with the patentee as if the patent were valid, and has paid some of the license dues? It would appear from the case of *Hayne v. Maltby*, and from the mode in which that case has been subsequently understood, that the estoppel must arise out of recitals or admissions of the defendant in his contract, and that it does not arise out of the mere circumstance of having worked under license. In *Hayne v. Maltby* there was no recital of the plaintiff's title, but an agreement to use a machine according to the specification, and a covenant to pay. A plea that the invention was not new was sustained, and it was held that the doctrine of estoppel did not apply.³ The effect of this case has been thus explained by Lord Cottenham: "That although a party has dealt with the patentee, and has carried on business, yet that he may stop, and then the party who claims to be patentee cannot recover without giving the other party the opportunity of disputing his right, and if the defendant successfully dispute his right, that notwithstanding he has been dealing under a contract, it is competent to the defendant to do so. That is exactly coming to the point which I put,

¹ *Bowman v. Rostrom*, 2 Ad. & El. 295.

² *Taylor v. Hare*, 1 N. R. 260; s. c. 1 Webs. Pat. Cas. 292. Where the contract between patentee and licensee has been executed, and is not still executory, a plea by the licensee that the patent is invalid, in an action for the license money, is bad. *Lawes v. Purser*, 38 Law & Eq. R. 48.

³ *Hayne v. Maltby*, 3 T. R. 438.

whether, at law, the party was estopped from disputing the patentee's right, after having once dealt with him as the proprietor of that right; and it appears from the authority of that case, and from the other cases, that from the time of the last payment, if the manufacturer can successfully resist the patent right of the party claiming the rent, that he may do so in answer to an action for the rent for the use of the patent during that year." ¹

§ 217. Where there has been no enjoyment by the licensee, and there is no covenant or recital admitting the validity of the patent, its invalidity may be set up as a failure of consideration, in an action upon an agreement to pay a certain sum for the right to use the patent privilege.² The competency of a licensee to dispute the validity of the patent is a question which may also arise where the licensee is proceeded against for an infringement, upon the ground that he is using the patent contrary to the conditions in his license. If, for example, one receive a license to use a patented machine on condition that he pay a stipulated sum on all the articles which he may make by it, and, after having begun to use the machine, he refuses or neglects to pay the license dues, or to comply with any other condition of the license, he may be enjoined in equity for an infringement like any other person unlawfully using the machine.³ Whether, in such a case, the licensee can set up the invalidity of the patent, as any other party could, must depend on the terms and operation of his contract, and upon what he himself claims under it. Merely taking a license, without any covenants or recitals admitting the validity of the patent, does not, as we have already seen, estop the licensee. But if there are such admissions in the contract, and the licensee has worked under it, and has paid the license dues for a time, and then stops, or if he still continues to claim under the license, and excuses his non-payment by reason of the non-performance of some agreement on the part of the patentee, he will still remain bound by his relation as licensee to admit the validity of the patent, and the sole question will be whether he is liable for an infringement; which will depend upon the validity of his excuses for not paying on account of a breach of

¹ *Neilson v. Fothergill*, 1 Webs. Pat. Cas. 290.

² *Chauter v. Leese*, 4 M. & W. 295; affirmed on error, 5 M. & W. 698.

³ *Brooks v. Stolley*, 3 M'Lean, 523; *Neilson v. Fothergill*, Webs. Pat. Cas. 287, 290; *Woodworth v. Cooke*, 2 Blatchf. 151.

the agreement by the patentee. But a different question arises where the licensee undertakes to repudiate the contract of license altogether, and to stand upon the right of every person to use the alleged invention because it is not new, or because the patent is void for some other reason. In such a case he foregoes all benefit of the license as a permission to use the alleged invention; but having taken the license, he is estopped by any admissions which it contains, unless he can avoid their effect by showing that he was deceived and misled.

§ 218. The situation of a licensee where the patentee undertakes to treat the license as forfeited for non-performance or violation of the conditions of the license, also presents several important subjects of inquiry. In the first place, it has been held, that a clause in a license, making it void on non-payment of the money consideration stipulated, is to be regarded as giving the patentee a double remedy; that is to say, he may enforce the collection of what is due to him, or he may treat the license as forfeited, and proceed to enjoin the licensee as infringer.¹ So, too, a breach of a condition in a license, under which the licensee was bound not to sell the manufactured products of a machine to be carried for consumption out of the territory embraced by the license, works a forfeiture, and the licensee may be enjoined.² In the next place, it has been held, that where the proprietor of the patent elects to treat a license as forfeited for breach of a condition, and to proceed against the licensee as against any other person using the patented thing without right, and to have the license declared void, the defendant is remitted to any rights he had anterior to the license, so that he may set up in his answer (in equity) a right which he had derived from the original patentee under a former term of the patent, and which in con-

¹ *Woodworth v. Weed*, 1 Blatchf. 165.

² *Wilson v. Sherman*, 1 Blatchf. 536. In this case the condition on which a license was granted to use a machine for planing lumber was, that the licensee should not sell to others the manufactured products of the machine to be carried out of the territory or sold as an article of merchandise, or dress lumber for other persons to be carried out of the territory and resold as an article of merchandise. It was held that the true meaning and operation of this restriction was, that the manufactured product should not, with the privity or consent of the licensee, be sold out of the territory as an article of merchandise, or with his privity and consent be sold within the territory, to be carried out and resold as merchandise.

temptation of law survived into the existing term.¹ How far the principle of this decision would extend, to permit the defendant to avoid any admissions contained in the license respecting the validity of the patent, is, of course, questionable. It is to be observed that what was held in this case was that, where the plaintiff undertook to avoid the license by reason of a breach of a condition on the part of the licensee, or, in other words, to proceed against the licensee as a person without a title to use the invention, the latter could be permitted to show a prior title devolved upon him before the license, and still existing. But it may be questioned whether, in such a case, the defendant, as against admissions made by him in his contract of license respecting the validity of the patent, would be remitted to *all* the rights which he had anterior to the license, one of which would have been the right to dispute the patent itself. The decision above cited does not extend to this point.

§ 218 *a*. A license to a person to use an invention "at his own establishment, but not to be disposed of to others for that purpose," simply authorizes the licensee to use it himself at his own establishment, and does not confer upon him the right to authorize others to use it in conjunction with himself, or otherwise; nor is he entitled to use it at another establishment owned by himself and others.² And so where a railroad company was licensed to use a patented improvement, and subsequently by consolidation and change of name greatly extended their lines, it was held that the license extended no further than the road in use at the time of granting the license, or which the company was then authorized to construct, and did not therefore entitle the company to use the improvement on the newly acquired portion.³ So also a license to use vulcanized India rubber for coating cloths for the purpose of japanning, marbling and variegated japanning, restricted the licensee to the manufacture of the particular kind of goods therein specified, and conveys no authority to use the rubber for coating cloths for any other purpose.⁴

¹ *Woodworth v. Cook*, 2 Blatchf. 151.

² *Rubber Company v. Goodyear* (1869), 9 Wall. 788.

³ *Emigle v. Chicago, Burlington, & Quincy R.R. Co.* (1863), 2 Fisher's Pat. Cas. 387.

⁴ *Goodyear v. Providence Rubber Co.* (R. I. 1864), 2 Fisher's Pat. Cas. 499.

CHAPTER VI.

THE SPECIFICATION.

§ 219. HAVING ascertained the kinds of subjects for which letters-patent may be obtained, and the parties entitled to take, renew, or extend them, we have now to state the proceedings requisite to the issuing, renewal, and extension of patents, and the principles which govern their construction. As the first step to be taken, in making application for a patent, is to prepare a written description of the invention or discovery, the requisites for this instrument, called the specification, and the rules for its construction, will first engage our attention.

§ 220. The act of Congress of July 4, 1836, c. 357, § 6, contained the following enactment:—

“But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, 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, and use the same; and in case of any machine, he shall fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery. He shall, furthermore, accompany the whole with a drawing or drawings, and written references, where the nature of the case admits of drawings, or with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention or discovery is of a composition of matter; which descriptions and drawings, signed by the inventor and attested by two witnesses,

shall be filed in the Patent Office; and he shall, moreover, furnish a model of his invention, in all cases which admit of a representation by model, of a convenient size to exhibit advantageously its several parts.”¹

These provisions were substantially re-enacted in the law of 1870.²

§ 221. The specification, under our law, occupies a relation to the patent somewhat different from the rule in England. In England the specification does not form part of the patent, so as to control its construction; but the rights of the inventor are made to depend on the description of his invention, inserted in the title of the patent, and cannot be helped by the specification, the office of which is to describe the mode of constructing, using, or compounding the invention mentioned in the patent.³ But in the United States the specification is drawn up and filed before the patent is granted, and is referred to in the patent itself, a copy being annexed. It is therefore the settled rule in this

¹ The act of 1793, c. 55. § 3, sets forth the requisites of a specification as follows: “And be it further enacted, that every inventor, before he can receive a patent, shall swear or affirm, that *he does verily believe, that he is the true inventor or discoverer of the art, machine, or improvement, for which he solicits a patent*; which oath or affirmation may be made before any person authorized to administer oaths, and shall deliver a written description of his invention, and of the manner of using or process of compounding the same, in such full, clear, and exact terms as to distinguish the same from all other things before known, and to enable any person skilled in the art or science of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same. And in the case of any machine, he shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions; and he shall accompany the whole with drawings and written references, where the nature of the case admits of drawings, or with specimens of the ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention is of a composition of matter; which description, signed by himself and attested by two witnesses, shall be filed in the office of the Secretary of State, and certified copies thereof shall be competent evidence, in all courts, where any matter or thing, touching such patent right, shall come in question. And such inventor shall, moreover, deliver a model of his machine, provided the Secretary shall deem such model to be necessary.”

² See *post*, §§ 275 *a* and 275 *b*, also appendix.

³ Phillips on Patents, p. 223; Godson on Patents, p. 108, 117; Hogg *v.* Emerson, 6 How. 437, 479.

country that the patent and the specification are to be construed together, in order to ascertain the subject-matter of the invention, and that the specification may control the generality of the terms of the patent, of which it forms a part.¹ In like manner drawings annexed to a specification, in compliance with the statute, are held to form a part of it, and are to be regarded in the construction of the whole instrument.² Where the term "patent," therefore, is used in the following discussion of the rules of construction, it will be understood to include the specification and drawings annexed to it.³

§ 222. In construing patents, it is the province of the court to determine what it is that is intended to be patented, and whether the patent is valid in point of law. Whether the invention itself be specifically described with reasonable certainty is a question of law upon the construction of the terms of the patent; so that it is for the court to determine whether the invention is so vague and incomprehensible as in point of law not to be patentable, whether it is a claim for an improved machine, for a combination, or a single invention; and, in short, to determine what the subject-matter is, upon the whole face of the specification and the accompanying drawings.⁴ It is, therefore, the duty of the jury

¹ *Whittemore v. Cutter*, 1 Gallis. 429, 437; *Barrett v. Hall*, 1 Mas. 447, 477; *Pitts v. Whitman*, 2 Story's R. 609, 621. So, too, the specification may enlarge the recitals of the invention in the letters. *Hogg v. Emerson*, *ut supra*.

² *Earle v. Sawyer*, 4 Mas. 9. It seems, too, that drawings not *referred to* in the specification may be used to explain it. *Washburn v. Gould*, 3 Story's R. 122, 133; *Brooks v. Bicknell*, 3 M'Lean's R. 250, 261. But they must be drawings accompanying the specification, otherwise they do not form a part of it.

³ The fifth section of the act of 1836 declares that "every patent shall contain a short description or title of the invention or discovery, correctly indicating its nature and design," and "referring to the specification for the particulars thereof, a copy of which shall be annexed to the patent, specifying what the patentee claims as his invention or discovery." The Supreme Court of the United States, in a recent case, have held that wherever this form of letters, with a specification annexed and referred to, has been adopted, either before or since the act of 1836, the specification is to be considered as part of the letters in construing them. *Hogg v. Emerson*, 6 How. 437, 482.

⁴ *Davis v. Palmer*, 2 Brock. 298; *Lowell v. Lewis*, 1 Mas. 189; *Carver v. Braintree Manuf. Co.*, 2 Story, 434, 437, 441; *Washburn v. Gould*, 3 Story, 122, 130, 137, 138, 140, 141; *Davoll v. Brown*, 1 Woodbury & Minot, 53, 56; *Emerson v. Hogg*, 2 Blatchf. 1.

to take the construction of the patent from the court, absolutely, where there are no terms of art made use of which require to be explained by evidence, and no surrounding circumstances to be ascertained as matter of fact, before a construction can be put upon the instrument. But where terms of art requiring explanation are made use of, or where the surrounding circumstances affect the meaning of the specification, these terms and circumstances are necessarily referred to the jury, who must take the construction from the court, conditionally, and determine it according as they find the facts thus put to them.¹

Where, however, it becomes necessary to compare two specifications, e. g. where the defendant, in an action for infringement, controverts the novelty of plaintiff's invention by producing a patent previously granted to some third party, several questions arise, which have recently received in England an elaborate discussion. One is, whether the *court alone* can, on a mere comparison of the two specifications, decide that the inventions therein described are in fact identical.² The other is, whether the prior specification, which is relied upon to defeat the claim of a subsequent patentee, must be in itself so clear and complete as to sustain a patent therefor, or whether it is enough if it contain

¹ Washburn *v.* Gould, *ut supra*. In Neilson *v.* Harford, Webs. Pat. Cas. 370, in the Exchequer, Parke, B., delivering the judgment of the court, said: "Then we come to the question itself, which depends on the proper construction to be put on the specification itself. It was contended, that of this construction the jury were to judge. We are clearly of a different opinion. The construction of all written instruments belongs to the court alone, whose duty it is to construe all written instruments as soon as the true meaning of the words in which they are couched and the surrounding circumstances, if any, have been ascertained by the jury; and it is the duty of the jury to take the construction from the court, either absolutely, if there be no words to be construed as words of art, or phrases used in commerce, and the surrounding circumstances to be ascertained, or conditionally, where those words or circumstances are necessarily referred to them. Unless this were so, there would be no certainty in the law, for a misconstruction by the court is the proper subject, by means of a bill of exceptions, of redress in a court of error, but a misconstruction by the jury cannot be set right at all effectually. Then, taking the construction of this specification upon ourselves, as we are bound to do, it becomes necessary to examine what the nature of the invention is which the plaintiff has disclosed by this instrument."

² On this point consult the chapter on Questions of Law and of Fact.

a mere hint of the process or other invention underlying the subsequent patent.¹

§ 223. It is, however, the province of the jury to decide, on the evidence of experts, whether the invention is described in such full, clear, and exact terms as to enable a skilful person to put it in practice, from the specification itself.² As specifications are drawn by persons more conversant with the subject than juries, who are selected indiscriminately from the public, and as they are addressed to competent workmen, familiar with the science or branch of industry to which the subject belongs, the evidence of those persons must be resorted to who are able to tell the jury that they see enough on the face of the specification to enable them to make the article, or reproduce the subject of the patent, without difficulty.³

§ 224. The rule of our law, that the specification may control the generality of the terms of the patent, must be subject to this qualification. If there is a clear repugnancy between the description of the invention as given in the specification, and the invention stated in the letters-patent, the patent will be void; for if the letters are issued for an invention that is not described in the specification, the statute is not complied with. The rule which allows the letters-patent to be controlled by the specification cannot extend to a case where the terms of the former are inconsistent with those of the latter.⁴

¹ As to this, see Chapter on Action at Law. The leading cases on the subject are *Bovill v. Pimm*, 36 E. L. & Eq. 441; *Bush v. Fox*, 38 E. L. & Eq. 1; *Betts v. Menzies*, 7 Law Times, n. s. 110, or 4 Best & Smith, Q. B. 996, overruling same case in 8 Ell. & Blackb. 923; *Hill v. Evans*, 6 Law Times, n. s. 90.

² *Davis v. Palmer*, 2 Brock. 298; *Lowell v. Lewis*, 1 Mas. 182, 190; *Carver v. Braintree Manf. Co.*, 2 Story's R. 432, 437, 441; *Washburn v. Gould*, 3 Story's R. 122, 138; *Davoll v. Brown*, 1 Woodbury & Minot, 53, 57; *Walton v. Potter*, Webs. Pat. Cas. 585, 595.

³ *Walton v. Potter*, Webs. Pat. Cas. 585, 595.

⁴ The case of the *King v. Wheeler*, 2 Barn. & Ald. 345, presents an instance of the invention stated in the patent remaining wholly undescribed by the specification, which described something else. In the recent case of *Cook v. Pearce*, 8 Ad. & Ell. n. s. 1044, where the patent was taken out "for improvement in *carriages*," and the invention was in fact an improvement in *German shutters*, which were used only in some kinds of carriages, the Exchequer Chamber, reversing the opinion of the Q. B., held that where the title is not inconsistent with the specification, and no fraud is practised on the crown or the

§ 225. The general rule for the construction of patents in this country is that they are to be construed liberally, and not to be subjected to a rigid interpretation. The nature and extent of the invention claimed by the patentee is the thing to be ascertained; and this is to be arrived at through the fair sense of the words which he has employed to describe his invention.¹

subject, it is not a fatal objection that the title is so general as to be capable of comprising a different invention from that which is claimed; and that the title in question did not necessarily imply any untrue assertion, and the patent was valid.

¹ *Ames v. Howard*, 1 Sumner, 482, 485. Mr. Justice Story said: "Patents for inventions are not to be treated as mere monopolies, odious in the eyes of the law, and therefore not to be favored; nor are they 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 object to be to promote the progress of science and useful arts, an object as truly national and meritorious and well founded in public policy as any which can possibly be within the scope of national protection. Hence, it has always been the course of the American courts (and it has latterly become 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 sense of the words of the specification, is the nature and extent of the invention claimed by the party; and when the nature and extent of that claim are apparent, not to fritter away his rights upon formal or subtle objections of a purely technical character."

In *Blanchard v. Sprague*, 3 Sumner, 535, 539, the same learned judge said: "Formerly, in England, courts of law were disposed to indulge in a very close and strict construction of the specifications accompanying patents, and expressing the nature and extent of the invention. This construction seems to have been adopted upon the notion, that patent rights were in the nature of monopolies, and therefore were to be narrowly watched, and construed with a rigid adherence to their terms, as being in derogation of the general rights of the community. At present a far more liberal and expanded view of the subject is taken. Patents for inventions are now treated as a just reward for ingenious men, and as highly beneficial to the public, not only by holding out suitable encouragements to genius and talents and enterprise, but as ultimately securing to the whole community great advantages from the free communication of secrets, and processes, and machinery, which may be most important to all the great interests of society, to agriculture, to commerce, and to manufactures, as well as to the cause of science and art. In America this liberal view of the subject has always been taken; and indeed it is a natural, if not a necessary result, from the very language and intent of the power given to Congress by the Constitution, on this subject. Congress (says the Constitution) shall have power to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclu-

Patents for inventions are not to be treated as mere monopolies, and therefore as odious in the law, but are to receive a liberal construction, and under a fair application of the rule that they be construed *ut res magis valeat quam pereat*. Hence where the claim immediately follows the description, it may be construed in connection with the explanations contained in the specification, and be restricted accordingly.¹

§ 226. But at the same time it is to be observed, that the statute prescribes certain requisites for this description of an invention which are of long standing; and the decisions of the courts, explaining and enforcing these requisites, have established certain rules of construction, intended to guard the public against defective or insufficient descriptions, on the one hand, and to guard inventors, on the other hand, against the acuteness and ingenuity and captious objections of rivals and pirates. The foundation of all these rules of construction is to be found in the object of the specification, which may be thus stated, in the language of the Supreme Court of the United States.

§ 227. The specification has two objects: one is to make known the manner of constructing the machine (if the invention is of a machine) so as to enable artisans to make and use it, and thus to give the public the full benefit of the discovery after the expiration of the patent; the other object of the specification is, to put the public in possession of what the party claims as his own invention, so as to ascertain if he claim any thing that is in common use or is already known, and to guard against prejudice or injury from the use of an invention which the party may otherwise innocently suppose not to be patented. It is, therefore, for the purpose of warning an innocent purchaser or other person using a machine of his infringement of the patent, and at the same time of taking

sive right of their respective writings and discoveries." Patents, then, are clearly entitled to a liberal construction, since they are not granted as restrictions upon the rights of the community, but are granted "to promote science and useful arts."

See, also, *Ryan v. Goodwin*, 3 Sumner, 514, where it is said that if the court can perceive, on the whole instrument, the exact nature and extent of the claim made by the inventor, it is bound to adopt that interpretation, and to give it full effect. See also *Wyeth v. Stone*, 1 Story's R. 270, 286; *Davoll v. Brown*, 1 Woodbury & Minot, 53, 57.

¹ *Turrill v. Michigan Southern, &c. R.R.*, 1 Wall. 491. See *Turrill v. Illinois Central R.R. Co.*, 3 Fisher's Pat. Cas. 330.

from the inventor the means of practising upon the credulity or the fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification.¹

The claim is not intended to be any description of the means by which the invention is to be performed, but is introduced for the security of the patentee, that he may not be supposed to claim more than he can support as an invention. It is introduced, lest in describing and ascertaining the nature of his invention, and by what means the same is to be performed (particularly in the case of a patent for an improvement), the patentee should have inadvertently described something which is not new, in order to render his description of the improvement intelligible. The claim is *not intended to aid the description, but to ascertain the extent of what is claimed as new*. It is not to be looked to as the means of making a machine according to the patentee's improvements.²

§ 228. It has been justly remarked, by a learned writer, that the statute requisites for a good specification run so much into each other, in their nature and character, and are so blended together, that it is difficult to treat of them separately.³ But the leading purposes of the whole of the statute directions are two: *first*, to inform the public what the thing is of which the patentee claims to be the inventor, and therefore the exclusive proprietor during the existence of his patent; *second*, to enable the public, from the specification itself, to practise the invention thus described, after the expiration of the patent. The principles of construction, and the authorities from which they are drawn, may therefore be discussed with reference to these two objects.

§ 229. I. The first rule for preparing a specification is, —

To describe the subject-matter, or what the patentee claims to have invented, so as to enable the public to know what his claim is.

Whether the patentee has done this, in a given case, is, as we have seen, generally a question of law for the court, on the construction of the patent. It is not necessary that the language employed should be technical, or scientific, although at the same time it must not mislead. If the terms made use of will enable

¹ *Evans v. Eaton*, 7 Wheaton, 356, 433.

² Per Lord Cottenham, L. C., in *Kay v. Marshall*, 2 Webs. Pat. Cas. 39.

³ Phillips on Patents, p. 237.

the court to ascertain clearly, by fair interpretation, what the party intends to claim, an inaccuracy or imperfection in the language will not vitiate the specification.¹ But it must appear with reasonable certainty what the party intends to claim; for it is not to be left to minute references and conjectures, as to what was previously known or unknown; since the question is not what was before known, but what the patentee claims as new.² If the patentee has left it wholly ambiguous and uncertain, so loosely defined, and so inaccurately expressed, that the court cannot, upon fair interpretation of the words, and without resorting to mere vague conjecture of invention, gather what the invention is, then the patent is void for this defect. But if the court can clearly see what is the nature and extent of the claim, by a reasonable use of the means of interpretation of the language used, then, it is said, the patentee is entitled to the benefit of it, however imperfectly and inartificially he may have expressed himself. For this purpose, phrases standing alone are not to be singled out, but the whole is to be taken in connection.³

§ 230. The statute requires the patentee to give "a written description of his invention or discovery." This involves the necessity, in all cases where the patentee makes use of what is old, of distinguishing between what is old and what is new. He is required to point out in what his invention or discovery consists;

¹ *Wyeth v. Stone*, 1 Story's R. 271, 286; *Carver v. The Braintree Manf. Co.*, 2 Story's R. 408, 446; *Neilson v. Harford*, Webs. Pat. Cas. 331, 369; *Bloxam v. Elsee*, 1 Car. & P. 558; *Blake v. Stafford*, 3 Fisher's Pat. Cas. 294.

² *Lowell v. Lewis*, 1 Mas. 182, 188. A general statement that the patented machine is, in all material respects (without stating what respects), an improvement on an old machine, is no specification at all. *Ib.* See also *Kneass v. The Schuylkill Bank*, 4 Wash. 9. If the patent be for an improved machine, or for an improvement of a machine (the meaning of the terms is the same), it must state in what the improvement specifically consists, and it must be limited to such improvement. If, therefore, the terms be so obscure or doubtful that the court cannot say which is the particular improvement which the patentee claims, and to what it is limited, the patent is void for ambiguity; and if it covers more than the improvement, it is void, because it is broader than the invention. *Barrett v. Hall*, 1 Mas. 447.

³ *Ames v. Howard*, 1 Sumner, 482, 485. The drawings are to be taken in connection with the words, and if, by a comparison of the words and the drawings, the one would explain the other sufficiently to enable a skilful mechanic to perform the work, the specification is sufficient. *Bloxam v. Elsee*, 1 Car. & P. 558.

and if he includes in his description what has been invented before, without showing that he does not claim to have invented that, his patent will be broader than his invention, and therefore void.¹ Whatever appears to be covered by the claim of the patentee, as his own invention, must be taken as part of the claim, for courts of law are not at liberty to reject any part of the claim; and therefore if it turns out that any thing claimed is not new, the patent is void, however small or unimportant such asserted invention may be.²

¹ *Dixon v. Moyer*, 4 Wash. 68, 73. In this case, Mr. Justice Washington said: "It was insisted by the plaintiff's counsel, that this specification is perfectly intelligible to an artist, who could experience no difficulty in making such a saddle as is there described; and that if it be not so, still the defendant cannot avail himself of the defect, unless he had stated it in his notice, and also proved at the trial an intention in the plaintiff to deceive the public. But these observations are all wide of the objection, which is not that the specification does not contain the whole truth relative to the discovery, or that it contains more than is necessary. It is admitted that the specification does not offend in either of these particulars. But the objection is, that throughout the whole of a very intelligible description of the mode of making the saddle, the patentee has not distinguished what was new from what was old and before in use, nor pointed out in what particulars his improvement consisted." See also *Carpenter v. Smith*, Webs. Pat. Cas. 530, 532, where Lord Abinger, C. B., said: "It is required as a condition of every patent, that the patentee shall set forth in his specification a true account and description of his patent or invention, and it is necessary in that specification that he should state what his invention is, what he claims to be new, and what he admits to be old; for if the specification states simply the whole machinery which he uses, and which he wishes to introduce into use, and claims the whole of that as new, and does not state that he claims either any particular part, or the combination of the whole as new, why then his patent must be taken to be a patent for the whole, and for each particular part, and his patent will be void if any particular part turns out to be old, or the combination itself not new." See also *Davis v. Palmer*, 2 Brock. 298; *Wyeth v. Stone*, 1 Story's R. 273; *Lowell v. Lewis*, 1 Mas. 188, where Mr. Justice Story said: "The patentee is clearly not entitled to include in his patent the exclusive use of any machinery already known; and if he does, his patent will be broader than his invention, and consequently void. If, therefore, the description in the patent mixes up the old and the new, and does not distinctly ascertain for which, in particular, the patent is claimed, it must be void; since if it covers the whole, it covers too much, and if not intended to cover the whole, it is impossible for the court to say what, in particular, is covered as the new invention."

² *Moody v. Fiske*, 2 Mas. 112, 118. In this case, Mr. Justice Story said: "Where the patentee claims any thing as his own invention, in his specifica-

§ 231. But there is a very important rule to be attended to, in this connection, which has been laid down by the Court of Common Pleas in England, viz., that a specification should be so construed, as, consistently with the fair import of language, will make the claim coextensive with the actual discovery. So that a patentee, unless his language necessarily imports a claim of things in use, will be presumed not to intend to claim things which he must know to be in use.¹

tion, courts of law cannot reject the claim ; and if included in the patent, and found not to be new, the patent is void.”

In the case of *Campion v. Benyon*, 3 Brod. & B. 5, the patent was taken out for “an improved method of making sail-cloth, without any starch whatever.” The real improvement consisted in a new mode of texture, and not in the exclusion of starch, the advantage of excluding that substance having been discovered and made public before. Park, J., said : “In the patentee’s process he tells us that the necessity of using starch is superseded, and mildew thereby entirely prevented ; but if he meant to claim as his own an improved method of texture or twisting the thread to be applied to the making of unstarched cloth, he might have guarded himself against ambiguity, *by disclaiming* as his own discovery the advantage of excluding starch.” In this case, the specification itself furnished no means by which the generality of its expressions could be restrained. But there is a case where the literal meaning of terms which would have covered too much ground was limited by other phrases used in the context. The specification stated the invention to be an improved apparatus for “extracting inflammable gas by heat, from pit-coal, tar, or *any other substance* from which gas or gases, capable of being employed for illumination, can be extracted by heat.” Lord Tenterden held that the words “any other substance” must mean other substances *ejusdem generis* ; and therefore that it was not a fatal defect that the apparatus would not extract gas from oil ; and that oil was not meant to be included, it being at that time considered too expensive for the making of gas for purposes of illumination, though it was known to be capable of being so used. *Crossley v. Beverly*, 3 Car. & P. 513 ; Webs. Pat. Cas. 106. Upon this distinction, Mr. Webster remarks that “the true principle would appear to be the intention of the party at the time, first, as expressed distinctly on the face of the specification ; and secondly, as may be inferred therefrom, according to the state of knowledge at the time, and other circumstances.” Webs. Pat. Cas. 110, note. Where the patentee in his specification claimed “an improvement in the construction of the axles or bearings of railway or *other wheeled carriages*,” and it appeared that the improvement, though it had never before been applied to railway carriages, was well known as applied to other carriages, it was held that the patent was not good. *Winans v. Providence Railroad Company*, 2 Story’s R. 412.

¹ *Haworth v. Hardcastle*, Webs. Pat. Cas. 480, 484. In this case, Sir N. C. Tindal, C. J., said : “As to the second ground upon which the motion for a

§ 232. The object of the distinction between what is new and what is old is to show distinctly what the patentee claims as his invention. But it has been said that the mere discrimination between what is old and what is new will not, in all cases, show this, for perhaps the patentee does not claim all that is new.¹ But the meaning of the authorities, as well as the purpose of the statute, shows that the object of the specification is to state distinctly what the patentee claims as the subject-matter of his invention or discovery; and the discrimination commonly made between what is new and what is old is one of the means necessary to present clearly the subject-matter of the invention or discovery.² In order to make this discrimination, the patentee is not confined to any precise form of words.³ The more usual

nonsuit proceeded, we think, upon the fair construction of the specification itself, the patentee does not claim, as part of his invention, either the rails or staves over which the calicoes and other cloths are to be hung, or the placing them at the upper part of the building. The use of rails and staves for this purpose was proved to have been so general before the granting of this patent, that it would be almost impossible *à priori* to suppose that the patentee intended to claim what he could not but know would have avoided his patent, and the express statement that he makes, 'that he constructs the stove or drying house in a manner nearly similar to those which are at present in use, and that he arranges the rails or staves on which the cloth or fabric is intended to be hung or suspended near to the upper part of the said stove or drying house,' shows clearly that he is speaking of those rails or staves as of things then known and in common use, for he begins with describing the drying house as nearly similar to those in common use; he gives no dimensions of the rails or staves, no exact position of them, nor any particular description by reference, as he invariably does when he comes to that part of the machinery which is peculiarly his own invention. There can be no rule of law which requires the court to make any forced construction of the specification, so as to extend the claim of the patentee *to a wider range than the facts would warrant; on the contrary, such construction ought to be made as will, consistently with the fair import of the language used, make the claim of invention coextensive with the new discovery of the grantee of the patent.* And we see no reason to believe that he intended under this specification to claim either the staves, or the position of the staves as to their height in the drying house, as a part of his own invention."

¹ Phillips on Patents, 270.

² See *Barrett v. Hall*, 1 Mas. 475; *Woodcock v. Parker*, 1 Gallis. 438; *Whittemore v. Cutter*, *ibid.* 478; *Odiorne v. Winkley*, 2 Gallis. 51; *Evans v. Eaton*, 3 Wheat. 454; 7 *ibid.* 356; *Wyeth v. Stone*, 1 Story's R. 273; *Ames v. Howard*, 1 Sumner, 482.

³ *Wyeth v. Stone*, 1 Story's R. 273.

form is to state affirmatively what the patentee claims as new, and if he makes use of any thing old, to state negatively that he does not claim that thing.¹ It is not enough that the thing designed to be embraced by the patent should be made apparent on the trial, by a comparison of the new with the old machine. The specification must distinguish the new from the old, so as to point out in what the improvement consists.²

§ 233. In describing what is old, it is not always necessary to enter into detail. Things generally known, or in common use, may be referred to in general terms, provided they create no ambiguity or uncertainty, and provided such reference is accompanied by an intelligible description of what is new.³ In describing an improvement of a machine, or, what is the same thing, an improved machine, great care must be taken not to describe the whole in such a way as to make it appear to be

¹ If a specification truly sums up and distinguishes the invention of the patentee, it will not be open to the objection of being too broad, although it describes with unnecessary minuteness a process well known to those conversant with the art. *Kneass v. The Schuylkill Bank*, 4 Wash. 9, 14. See also *Ames v. Howard*, 1 Sumner, 482, 485. Mr. Godson gives the following directions for drawing specifications: "That the new parts of the subject may be more clearly seen and easily known, the patentee must not only claim neither more nor less than his own invention, but he must *not appear* even unintentionally to appropriate to himself any part which is old, or has been used in other manufactures. (*Huddart v. Grimshaw*, Dav. Pat. Cas. 295; 1 Webs. Pat. Cas. 85.) Those parts that are old and immaterial, or are not of the essence of the invention, should either not be mentioned, or should be named only to be designated as old. The patentee is not required to say that a screw or bobbin, or any thing in common use, is not part of his discovery; yet he must not adopt the invention of another person, however insignificant it may appear to be, without a remark. If any parts are described as essential without a protest against any novelty being attached to them, it will seem, though they are old, that they are claimed as new. (*Bovill v. Moore*, Dav. Pat. Cas. 404; *Manton v. Parker*, Dav. Pat. Cas. 329.) The construction will be against the patentee that he seeks to monopolize more than he has invented, or that, by dwelling in his description on things that are immaterial or known, he endeavors to deceive the public, who are not to be deterred from using any thing that is old by its appearing in the specification as newly invented. They are to be warned against infringing on the rights of the patentee, but are not to be deprived of a manufacture which they before possessed. (Dav. Pat. Cas. 279; and 3 Meriv. 629.) It seems, therefore, to be the safest way in the specification to describe the whole subject, and then to point out all the parts which are old and well known." Godson on Patents, 128.

² *Dixon v. Moyer*, 4 Wash. R. 68.

³ *Davis v. Palmer*, 2 Brock. 298.

claimed as the invention of the patentee. The former machine, or other thing, should be set forth in the patent sufficiently to make known, according to the nature of the case, what it is that the patentee engrafts his improvement upon; he should then disclaim the invention of the thing thus referred to or described, and state distinctly his improvement as the thing which he claims to have invented.¹

§ 233 *a*. Thus in *Nichols v. Ross*,² the specification described the patented process as follows: "The table *a* moves on a *hollow spindle*, which is *fixed* in the framing of the machine by screw and nut at *b*; through the tube *b*, the strand or thread of india-rubber, or cotton, or other fibrous material which is to form one of the longitudinal elastic or non-elastic threads of the fabric, passes; the upper part of the tube *b* rising to such a position amongst the braiding threads that in the evolution of those threads from one selvage of the fabric to the other they pass under and over (and lie at the back and front of the fabric) each of the longitudinal threads or yarns." The jury found that the plaintiff's machine was new, but that the use of a *revolving* hollow tube was *not* new. It was held that, as the plaintiff's claim was for the hollow spindle, not *general* but *fixed*, this finding did not negative the novelty of the plaintiff's invention.

In *Holmes v. Lond. & N. W. R. W.*,³ Jervis, C.J., in rendering the decision of the court, says: "It is impossible for any one to read this specification without seeing that it claims what one would naturally have expected to be claimed. Harrison did not know at the time his specification was drawn what had been invented by Hancock; therefore he claims the whole as new. He takes out his patent for 'an improved turning-table for railway purposes.' The surface rails and catches are old; but Harrison, by applying certain supporting rods or arms in a new way, constructs what he describes as an improved turning-table. He goes

¹ In *Hill v. Thompson*, 8 Taunt. 375, Lord Ch. J. Dallas said: "This, like every other patent, must undoubtedly stand on the ground of improvement or discovery. If of improvement, it must stand on the ground of improvement invented; if of discovery, it must stand on the ground of the discovery of something altogether new; and the patent must distinguish and adapt itself accordingly." See also *Bovill v. Moore*, Dav. Pat. Cas. 398.

² *Nichols v. Ross*, 8 Mann., Gr. & Scott, 679.

³ *Holmes v. Lond. & N. W. R. W.*, 12 Com. Ben. 831; 16 E. L. & Eq. 409.

on in his specification to announce the general principle of his invention to consist ‘in supporting the revolving plate or upper platform of the turning-table, as also its stays, braces, arms, and supports on the top of a fixed post, well braced, and resting on or planted in the ground; the top of which post forms a pivot for the table to turn on, while support arms radiating from the framework (the weight of which is also sustained on the post), moving round the bottom part of the post with friction rollers, and fastened to the outer edges of the plate, stay the plate on all sides, and keep it steady to receive the superincumbent weight of carriages or whatsoever is to be turned upon it.’ He then goes on to describe how he does it. He does it by taking the old revolving plate or platform, with its rails and catches, and supporting it on a post, the top of which forms a pivot, which, for aught that appears, may be new, with support arms radiating from a framework moving round the bottom of the post, with friction rollers, and fastened to the outer edges of the plate; each of these being described as new, or at least not being stated to be old. The jury found that the post, the arms, and every thing except the suspending rods, were old. In order to make his specification good, either for an improvement of an old machine or for a new combination, Harrison should have said, ‘My principle is to suspend the revolving plate or platform on a post, with arms, braces, and supports’; and then, going through Hancock’s patent and describing all that as old, he should have gone on to say, ‘To this I add suspending rods, for the purpose of bringing the bearing on the centre of the table.’ No one can read this specification without seeing that this is in truth the meaning of it, and that the patentee supposes the arms to be new as well as the suspending rods, — in short, that all is new except the table, the rails, and the catches, which, by means of the suspending rods, he converts into a new and improved suspended turn-table. That being so, he clearly does not, in my opinion, comply with the rule which requires the patentee distinctly to state what is new and what is old.”¹

In *Hullett v. Hague*,² Lord Tenterden says: “The specification continues: ‘and I further declare that my said invention

¹ See also *Tetley v. Easton*, 22 E. L. & Eq. 321; *Allen v. Rawson*, 1 Mann., Gr. & Scott, 551.

² *Hullett v. Hague*, 2 B. & Ad. 370.

and improvement consists in forcing, by means of bellows or any other blowing apparatus, atmospheric or any other air, either in a hot or cold state, through the liquid or solution subjected to evaporation.' Now it was said that the words which immediately follow, 'and this I do by means of pipes,' constituted a separate and distinct sentence from those which immediately preceded them, and that the patentee had stated his invention in the preceding sentence, and had claimed (by implication) the same invention as that described by Knight and Kirk in their specification. But we think that the words, 'and this I do by means of pipes,' must, in conjunction with those which immediately precede them, be taken to form one entire sentence, and that they amount altogether to an allegation, on the part of the patentee, that his invention consisted of the method or process of forcing, by means of bellows or any other blowing apparatus, hot or cold air through the liquid subjected to evaporation, this being effected by means of pipes placed as directed in the specification. Now the method described in Knight and Kirk's patent appears to us entirely different."

In *Hastings v. Brown*,¹ the specification was held bad for leaving it uncertain whether the claim was for an invention of a cable-holder to hold one cable of whatever size, or for one to hold cables of different sizes.

In *Gamble v. Kurtz*,² the court say: "The other question depends upon what is the true nature of the plaintiff's claim as an inventor. If he claimed the use of two chambers with separate furnaces, as part of his invention, the jury have said it was not new, and the verdict should be entered for the defendant; otherwise, for the plaintiff. It seems to us that no reasonable doubt can be entertained as to the claim made by the plaintiff. After describing, by words and drawings, the apparatus which he used, he claimed as his invention 'iron retorts worked in connection *with each other*, as above described.' It was contended, on behalf of the plaintiff, that the meaning was that he claimed the use of two retorts worked in connection with the whole of the apparatus for condensing the muriatic gas. But the words of the specification are 'in connection with each other,' not in connection with the condensing apparatus; and he after-

¹ *Hastings v. Brown*, 16 E. L. & Eq. 172; s. c.

² *Gamble v. Kurtz*, 3 Mann., Gr. & Scott, 425.

wards goes on to claim as his the particular arrangement of receivers, which he had previously described. We can give no other meaning to this than that the plaintiff claimed, as part of his invention, the use of two chambers with separate furnaces, worked in connection with each other, so that the materials might be decomposed in one, and roasted or finished in the other; and that the plaintiff understood such to be the nature of his claim, appears clearly from the disclaimer he has entered in this case; in which, after disclaiming certain words in his description of his claim, he says: 'I further declare that, though I did not intend the words to extend to any other retorts than the iron retorts described in my specification, viz., iron retorts worked in connection with each other, in which the process is commenced in one retort and finished in the other, yet I have been informed the words may be construed to extend to any iron retorts; for which reason I am anxious to disclaim.' And this was the nature of the claim which the plaintiff endeavored at the trial to establish by evidence. The jury having found that the evidence did not establish it, the verdict on that special finding must be entered for the defendant."

In *Elliott v. Turner*,¹ the patentee described the invention to consist in the application of a warp of *soft or organzine* silk. The jury, having asked how they were to understand the word "or" in the specification, i. e. whether it was to be considered as having been used disjunctively, or whether the word "organzine" was to be regarded as the construction of the word "soft," the judge told them that unless the silk (used by the defendants) were *organzine*, it did not fall under the description of the patent. In the Exchequer Chamber this charge was overruled, the court deciding that the judge should not have told the jury that, in his opinion, soft and organzine silk were absolutely the same, but that the words were *capable* of being so construed, if the jury were satisfied that at the date of the patent there was only one description of soft silk, and that organzine, used in satin weaving; but otherwise, that the proper and ordinary sense of the word "or" was to be adopted, and the patent held to apply to every species of soft silk as well as to organzine silk.

§ 234. One of the most common defects in a specification con-

¹ *Elliott v. Turner*, 2 Mann., Gr. & Scott, 446.

sists in that sort of vagueness and ambiguity in the manner of describing the invention which makes it difficult or impossible to determine what the invention is. This is an objection distinct from an ambiguity in the terms made use of. Thus, where the directions contained in a specification were "to take any quantity of lead and calcine it, or minium, or red-lead," the objection was that it was uncertain whether the minium and red-lead were to be calcined, or only the lead.¹ So, too, if it be stated that a whole class of substances may be used to produce a given effect, when, in fact, only one is capable of being so used successfully, an ambiguity is at once produced, and the public are misled;² but if the patentee states the substances which he makes use of himself, and there are still other substances which will produce the effect, and he claims them, by a generic description, as comprehended within his invention, his claim will not be void for ambiguity, or too broad for his invention, provided the combination is new in respect to all the substances thus referred to.³

¹ *Turner v. Winter*, Webs. Pat. Cas. 80. Another objection taken was as to the white-lead which the patent professed to make by the same process by which it made something else; to which it was answered, that the invention did not profess to make common white-lead. Ashurst, J., said: "But that is no answer; for if the patentee had intended to produce something only like white-lead, or answering some of the purposes of common white-lead, it should have been so expressed in the specification. But, in truth, the patent is for making white-lead and two other things by one process. Therefore, if the process, as directed by the specification, does not produce that which the patent professes to do, the patent itself is void."

² *Bickford v. Skewes*, Webs. Pat. Cas. 218. If more parts be inserted than are necessary, as ten, where four are sufficient, the specification is void. *The King v. Arkwright*, Webs. Pat. Cas. 70.

³ *Ryan v. Goodwin*, 3 Sumner, 514, 519. In this case, Mr. Justice Story said: "Then as to the third point. This turns upon the supposed vagueness and ambiguity and uncertainty of the specification and claim of the invention thereby. The specification, after adverting to the fact, that the *loco-foco* matches, so called, are a compound of phosphorus, chlorate of potash, sulphuret of antimony, and gum arabic or glue, proceeds to state that the compound which he (Phillips) uses 'consists simply of phosphorus, chalk, and glue'; and he then states the mode of preparing the compound and the proportions of the ingredients; so that, as here stated, the essential difference between his own matches and those called *loco-foco* consists in the omission of chlorate of potash and sulphuret of antimony, and using in lieu thereof chalk. He then goes on to state, that 'the proportions of the ingredients may be varied, and that gum arabic, or other gum, may be substituted for glue; and other absorbent earths or materials may be used instead of carbonate of lime.'

§ 234 a. In like manner, where a particular effect or purpose in machinery is a part of the invention, and that effect may be pro-

He afterwards sums up his invention in the following terms: 'What I claim as my invention is the using of a paste or composition to ignite by friction, consisting of phosphorus, and [an] earthy material, and a glutinous substance only, without the addition of chlorate of potash, or of any other highly combustible material, such as sulphuret of antimony, in addition to the phosphorus. I also claim the mode herein described, of putting up the matches in paper, so as to secure them from accidental friction.' Upon this last claim I need say nothing, as it is not in controversy, as a part of the infringement of the patent, upon the present trial. Now, I take it to be the clear rule of our law in favor of inventors, and to carry into effect the obvious object of the Constitution and laws in granting patents, 'to promote the progress of science and useful arts,' to give a liberal construction to the language of all patents and specifications (*ut res magis valeat, quam pereat*), so as to protect and not to destroy the rights of real inventors. If, therefore, there be any ambiguity or uncertainty in any part of the specification, yet if, taking the whole together, the court can perceive the exact nature and extent of the claim made by the inventor, it is bound to adopt that interpretation, and to give it full effect. I confess that I do not perceive any ground for real doubt in the present specification. The inventor claims as his invention the combination of phosphorus with chalk or any other absorbent earth or earthy material, and glue, or any other glutinous substance; in making matches, using the ingredients in the proportions substantially as set forth in the specification. Now, the question is, whether such a claim is good, or whether it is void, as being too broad and comprehensive. The argument seems to be, that the inventor has not confined his claim to the use of chalk, but has extended it to the use of any other absorbent earths or earthy materials, which is too general. So he has not confined it to the use of glue, or even of gum arabic, but has extended it also to any other gum or glutinous substance, which is also too general. Now, it is observable that the Patent Act of 1793, c. 55, does not limit the inventor to one single mode, or one single set of ingredients, to carry into effect his invention. He may claim as many modes as he pleases, provided always that the claim is limited to such as he has invented, and as are substantially new. Indeed, in one section (§ 3) the act requires, in the case of a machine, that the inventor shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions. The same enactment exists in the Patent Act of 1836, c. 357, § 6. I do not know of any principle of law which declares, that, if a man makes a new compound, wholly unknown before for a useful and valuable purpose, he is limited to the use of the same precise ingredients in making that compound; and that, if the same purpose can be accomplished by him by the substitution in part of other ingredients in the composition, he is not at liberty to extend his patent so as to embrace them also. It is true that, in such a case, he runs the risk of having his patent avoided, if either of the combinations, the original or the substituted, have been known or used before in the like combination.

duced in several modes, it is sufficient for the patentee to state the modes which he contemplates as best, and his claim will not be void, as too vague or comprehensive, although he claims the variations from those modes as being equally his invention, without describing the manner of producing those variations.¹

But, if all the various combinations are equally new, I do not perceive how his claim can be said to be too broad. It is not more broad than his invention. There is no proof, in the present case, that the ingredients enumerated in this specification, whether chalk, or any other absorbent earth or earthy substance, were ever before combined with phosphorus and glue, or any gum or other glutinous substance, to produce a compound for matches. The objection, so far as it here applies, is not that these gums or earths have been before so combined with phosphorus, but that the inventor extends his claim so as to include all such combinations. There is no pretence to say, upon the evidence, that the specification was intended to deceive the public, or that it included other earthy materials than chalk, or other glutinous substances than glue, for the very purpose of misleading the public. The party has stated frankly what he deems the best materials, phosphorus, chalk, and glue, and the proportions and mode of combining them. But because he says that there may be substitutes of the same general character, which may serve the same purpose, thereby to exclude other persons from evading his patent and depriving him of his invention, by using one or more of the substitutes, if the patent had been confined to the combination solely of phosphorus, chalk, and glue, I cannot hold that his claim is too broad, or that it is void. My present impression is, that the objection is not well founded. Suppose the invention had been of a machine, and the inventor had said, I use a wheel in a certain part of the machine for a certain purpose, but the same effect may be produced by a crank, or a lever, or a toggle-joint, and therefore I claim these modes also; it would hardly be contended that such a claim would avoid his patent. I do not know that it has ever been decided, that, if the claim of an inventor for an invention of a compound states the ingredients truly which the inventor uses to produce the intended effect, the suggestion that other ingredients of a kindred nature may be substituted for some part of them, has been held to avoid the patent *in toto*, so as to make it bad, for what is specifically stated. In the present case it is not necessary to consider that point. My opinion is, that the specification is not, in point of law, void from its vagueness, or generality, or uncertainty.”

¹ Carver v. Braintree Manf. Co., 2 Story's R. 432, 440. “Another objection is, that the plaintiff, in his claim, has stated that the desired distance or space between the upper and the lower surfaces of the rib, whether it ‘be done by making the ribs thicker at that part, or by a fork or division of the rib, or by any other variation of the particular form,’ is a part of his invention. It is said, that the modes of forking and dividing are not specified, nor the variations of the particular form given. This is true; but then the Patent Act requires the patentee to specify the several modes ‘in which he has contemplated the application of the distinguishing principle or character of his

§ 235. This kind of ambiguity is also distinguishable from the want of clear or specific directions, which will enable a mechanic to make the thing described. A specification may be perfectly sufficient, as to the point of stating what the invention is, and yet the directions for making the thing may be so vague and indefinite, as not to enable a skilful mechanic to accomplish the object.¹ It is for this reason, as we have seen, that the question, whether the specification discloses what the invention is, is a question for the court on construction of the patent; while the question, whether it sufficiently describes the mode of carrying the invention into practice, is a question for the jury.²

invention.' (Act of 1836, c. 357, § 6.) Now, we all know that a mere difference of form will not entitle the party to a patent. What the patentee here says in effect is: One important part of my invention consists in the space or distance between the upper and lower surfaces of the ribs, and whether this is obtained by making the rib solid, or by a fork, or division of the rib, or by any other variation of the form of the rib, I equally claim it as my invention. The end to be obtained is the space or distance equal to the fibre of the cotton to be ginned; and you may make the rib solid, or fork it, or divide it, or vary its form in any other manner, so as that the purpose is obtained. The patentee, therefore, guards himself against the suggestion, that his invention consists solely in a particular form, solid, or forked, or divided; and claims the invention to be his, whether the exact form is preserved or not, if its proportions are kept so as to be adapted to the fibre of the cotton which is to be ginned. In all this I can perceive no want of accuracy or sufficiency of description, at least so far as it is a matter of law, nor any claim broader than the invention, which is either so vague or so comprehensive as in point of law not to be patentable. It was not incumbent upon the patentee to suggest all the possible modes by which the rib might be varied, and yet the effect produced. It is sufficient for him to state the modes which he contemplates to be best, and to add, that other mere formal variations from these modes he does not deem to be unprotected by his patent."

¹ "It may not, perhaps, be easy to draw a precise line of distinction between a specification so uncertain as to claim no particular improvement, and a specification so uncertain as not to enable a skilful workman to understand the improvement, and to construct it. Yet we think the distinction exists. If it does, it is within the province of the jury to decide whether a skilful workman can carry into execution the plan of the inventor. In deciding this question, the jury will give a liberal common-sense construction to the directions of the specification." Per Marshall, C. J., in *Davis v. Palmer*, 2 Brock. 298, 308.

² Thus, in the case of a patent for "a new and useful improvement in the ribs of the cotton-gin," Mr. Justice Story said: "It is true, that the plaintiff in his specification, in describing the thickness of the rib in his machine, declares that it should be so thick, that the distance or depth between the upper

§ 235 *a*. Where ambiguity exists in the specification to such a degree that it cannot be elucidated, it is immaterial whether it had its origin in the *mala fides* of the patentee, or in the haste or incompetency of the draftsman. Whether the claim, which is invalid, was introduced purposely or by mistake is not taken into consideration by the court. The fact that the patent is ambiguous, or claims too much, is the vital test of its validity, and not the motive or circumstance in which such ambiguity or excessive claim originated.¹

§ 236. The ambiguity produced by a too great fulness of detail in the specification is likely to mislead both in determining what the invention claimed is, and in determining whether it is described with such accuracy as will enable a competent workman to put it in practice. We shall have occasion hereafter to state the rule, that the patentee is bound to disclose the most advantageous mode known to him, and any circumstance conducive to the advantageous operation of his invention; and it is a correlative

and the lower surface should be 'so great as to be equal to the length of the fibre to be ginned,' which, it is said, is too ambiguous and indefinite a description to enable a mechanic to make it, because it is notorious that not only the fibres of different kinds of cotton are of different lengths, long staple and short staple, but that the different fibres in the same kind of cotton are of unequal lengths. And it is asked, what then is to be the distance or depth or thickness of the rib? Whether a skilful mechanic could from this description make a proper rib for any particular kind of cotton is a matter of fact which those only who are acquainted with the structure of cotton gins can properly answer. If they could, then the description is sufficient, although it may require some niceties in adjusting the different thicknesses to the different kinds of cotton. If they could not, then the specification is obviously defective. But I should suppose that the inequalities of the different fibres of the same kind of cotton would not necessarily present an insurmountable difficulty. It may be, that the adjustment should be to be made according to the average length of the fibres, or varied in some other way. But this is for a practical mechanic to say, and not for the court. What I mean, therefore, to say on this point is, that, as a matter of law, I cannot say that this description is so ambiguous that the patent is upon its face void. It may be less perfect and complete than would be desirable, but still it may be sufficient to enable a skilful mechanic to attain the end. In point of fact, is it not actually attained by the mechanics employed by Carver, without the application of any new inventive power, or experiments? If so, then the objection could be answered as a matter of fact or a practical result." *Carver v. The Braintree Manf. Co.*, 2 Story's R. 432, 437.

¹ *Blake v. Stafford* (1867), 6 Blatchf. 195; s. c. 3 Fisher's Pat. Cas. 294.

of this rule, that if things wholly useless and unnecessary are introduced into the specification, as if they were essential, although the terms are perfectly intelligible, and every necessary description has been introduced, and the parts claimed are all newly invented, the patent may be declared void. The presumption, in such cases, according to the English authorities, is, that the useless and unnecessary descriptions were introduced for the purpose of overloading the subject and clouding the description, in order to mislead the public and conceal the real invention.¹

§ 237. There is one case where it seems to have been held that an improved mode of working his machine by the patentee, different from the specification of his patent, casts upon him the burden of showing that he made the improvement subsequently to the issuing of his patent, otherwise it will be presumed that he did not disclose in his specification the best method known to him.² But where a patentee of an improved machine claimed as his invention a part of it which turned out to be useless, it was held that this did not vitiate the patent, the specification not

¹ In Arkwright's case, several things were introduced into the specification, of which he did not make use. Buller, J., said: "Wood put No. 4, 5, 6, and 7 together, and that machine he has worked ever since; he don't recollect that the defendant used any thing else. If that be true, it will blow up the patent at once; he says he believes nobody that ever practised would find any thing necessary upon this paper but the No. 4, 5, 6, and 7; he should look after no others. Now if four things only were necessary instead of ten, the specification does not contain a good account of the invention." *The King v. Arkwright*, Webs. Pat. Cas. 70.

In Turner's patent for producing a yellow color, minium was directed to be used among other things, but it appeared that it would not produce the desired effect. The same learned judge said: "Now in this case no evidence was offered by the plaintiff to show that he had ever made use of the several different ingredients mentioned in the specification, as for instance minium, which he had nevertheless inserted in the patent; nor did he give any evidence to show *how* the yellow color was produced. If he could make it with two or three of the ingredients specified, and he has inserted others which will not answer the purpose, that will avoid the patent. So, if he makes the article, for which the patent is granted, with cheaper materials than those which he has enumerated, although the latter will answer the purpose equally well, the patent is void, because he does not put the public in possession of his invention, or enable them to derive the same benefit which he himself does." *Turner v. Winter*, Webs. Pat. Cas. 80. See also *Savory v. Price*, R. & M. 1; Webs. Pat. Cas. 83.

² *Bovill v. Moore*, Dav. Pat. Cas. 361, 401.

describing it as essential to the machine.¹ At the same time, it is necessary that the specification should be full and explicit enough to prevent the public from infringing the right of the patentee. An infringement will not have taken place, unless the invention can be practised completely by following the specification; otherwise, it has been said, it would be an infringement to do that perfectly, which, according to the specification, requires something else to be done to make it perfect. An infringement is a copy made after and agreeing with the principle laid down in the patent;² and if the patent does not fully describe any thing essential to the making or doing of the thing patented, there will be no infringement by the fresh invention of processes which the patentee has withheld from the public.³

¹ *Lewis v. Marling*, 10 B. & Cress. 22.

² Per Sir N. Tindal, C. J., in *Galloway v. Bleadon*, Webs. Pat. Cas. 521.

³ This doctrine was very clearly laid down by Alderson, B., in *Morgan v. Seaward*, Webs. Pat. Cas. 167, 181. "Then Henry Mornay, a young gentleman in Mr. Morgan's employment, where he has been apparently studying the construction of engines, speaks of a circumstance which does appear to me to be material. He says, Mr. Morgan in practice makes his rods of different lengths. He must necessarily do so, in order that the floats may follow at the same angle as that at which the driving float enters the water. The problem which Mr. Park solved is a problem applying to three floats only; but it appears that the other floats will not follow in the same order, unless some adjustment of the rods is made. Now, suppose it was to be desired that the floats should all enter the water at the given or required angle, if one should go in at one angle, and one at another, the operation of the machine would not be uniform; and the specification means that the party constructing a wheel should be able to make a wheel, the floats of which shall all enter at the same angle, and all go out at the same angle. Now in order in practice to carry that into effect, if there are more than three floats, something more than Mr. Park's problem would be required; and Mr. Mornay says actually, that Mr. Morgan in practice makes his rods of different lengths, and he must necessarily do that in order that the floats may follow at the same angle as the driving float enters the water. If so, he should have said in his specification, 'I make my rods of different lengths, in order that the rest of my floats may enter at the same angle; and the way to do that is so and so.' Or he might have said, 'it may be determined so and so.' But the specification is totally silent on the subject; therefore, a person reading the specification would never dream that the other floats must be governed by rods of unequal length; and least of all could he ascertain what their lengths should be, until he had made experiments. Therefore it is contended that the specification does not state, as it should have stated, the proper manner of doing it. He says, if they are made of equal lengths, though the governing rod would be vertical at the time of entering, and three would be so when they arrived at

It is the duty of an inventor to describe in his specification each substantially different modification of his invention which he has made.¹

§ 238. The ambiguity produced by a misuse of terms, so as to render the specification unintelligible, will be as fatal as any

the same spot, by reason of the operation Mr. Park suggests, yet the fourth would not come vertical at the proper point, nor would the fifth, sixth, or seventh. Then they would not accomplish that advantage which professes to be acquired. The patentee ought to state in his specification the precise way of doing it. If it cannot completely be done by following the specification, then a person will not infringe the patent by doing it. If this were an infringement, it would be an infringement to do that perfectly, which, according to the specification, requires something else to be done to make it perfect. If that be correct, you would prevent a man from having a perfect engine. He says, practically speaking, the difference in the length of the rods would not be very material, the difference being small. But the whole question is small, therefore it ought to have been specified; and if it could not be ascertained fully, it should have been so stated. Now this is the part to which I was referring, when, in the preliminary observations I addressed to you, I cited the case before Lord Mansfield, on the subject of the introduction of tallow to enable the machine to work more smoothly. There it was held that the use of tallow ought to have been stated in the specification. This small adjustment of these different lengths may have been made for the purpose of making the machine work more smoothly; if so, it is just as much necessary that it should be so stated in the specification, as it was that the tallow should be mentioned. The true criterion is this, has the specification substantially complied with that which the public has a right to require? Has the patentee communicated to the public the manner of carrying his invention into effect? If he has, and if he has given to the public all the knowledge he had himself, he has done that which he ought to have done, and which the public has a right to require from him.”

¹ *Sargent et al. v. Carter*, 21 Mon. Law Rep. 651. “He (the defendant in his own patent) describes two devices. If he was then possessed of a third, he was bound to describe that also. Having failed to do so, though I do not doubt he had made machines with a flexible arm before he applied for his first patent, I have strong reason to doubt whether it was capable of effecting the object proposed. It is a circumstance, also, that in the machines now built by the defendant, he has used, not the flexible arm, but a movable or rotating arm. If he first invented a flexible arm, as appears from the evidence in this case, and it accomplished the desired end, why does he not continue to use it? The other modification relied on is placing one end of the arm in a loose socket, where it is held by a pin, which being smaller than the aperture through the arm in which the pin is inserted, allows some play of the arm. But this modification was tried before he took his original patent, and not being therein alluded to or described and claimed in the reissued patent, the same observation applies to this as to the flexible knife-arm.”

other defect. Thus, where the directions were to use "sea-salt, or sal-gem, or fossil-salt, or any marine salt," and it appeared that "sal-gem" was the only thing that could be used, and that "fossil-salt" was a generic term, including "sal-gem," as well as other species of salt, it was held that the use of the term "fossil-salt" could only tend to mislead and to create unnecessary experiments, and therefore that the specification was in that respect defective.¹ In like manner, where the specification directed the use of "the finest and purest chemical white-lead," and it appeared that no such substance was known in the trade by that name, but that white-lead only was known; the specification was held defective.² But a mere mistake of one word for another in writing or printing, if explained by other parts of the patent and specification, as the use of the word "painting" for "printing," is immaterial.³

§ 239. The description of an improvement, when an improvement is the real subject-matter of the patent, should be made in such a manner as will clearly show that the improvement only is claimed by the patentee. If a machine substantially existed before, and the patentee makes an improvement therein, his patent should not comprehend the whole machine in its improved state, but should be confined to his improvement;⁴ and this is true, although the invention of the patentee consists of an addition to the old machine, by which the same effects are to be produced in a better manner, or some new combinations are added, in order to produce new effects.⁵ But if well-known effects are produced by machinery which in all its combinations is entirely new, the subject-matter will be a new machine, and of course the patent will cover the whole machine.⁶

§ 239 *a*. Where the invention embraces only one or more parts of a machine, as the coulter of a plough, or the divider or sweep-rake of a reaping-machine, the part or parts claimed must be specified and pointed out, so that constructors, other inventors, and the public may know how to make the invention, and what

¹ *Turner v. Winter*, 1 T. R. 606; *Webs. Pat. Cas.* 77.

² *Sturz v. De La Rue*, *Webs. Pat. Cas.* 83.

³ *Kneass v. The Schuylkill Bank*, 4 Wash. 9.

⁴ *Woodcock v. Parker*, 1 Gallis. 438; *Odiorne v. Winkley*, 2 Gallis. 51; *Barrett v. Hall*, 1 Mas. 447, 476.

⁵ *Whittemore v. Cutter*, 1 Gallis. 478.

⁶ *Ibid.*

is withdrawn from general use. But where both a new ingredient and a combination of old ingredients, embodied in the same machine, are claimed, greater particularity is required, as the property of the patentee consists not only in the new ingredient, but also in the new combination; and it is essential that the invention shall be so fully described that its precise nature may be known to the public.

In case of a claim for a combination, where all the ingredients of the invention are old, and where the invention consists entirely in a new combination of old ingredients, whereby a new and useful result is obtained, "such combination is sufficiently described, if the ingredients of which it is composed are named, their mode of operation given, and the new and useful result to be accomplished pointed out, so that those skilled in the art, and the public, may know the extent and nature of the claim, and what the parts are which co-operate to produce the described new and useful result."¹

§ 240. If the invention be an improvement, and be claimed as such, but nothing is said of any previous use, of which the use proposed is averred to be an improvement, the patent may incur the risk of being construed as a claim of entire and original discovery. Hence arises the necessity for reciting what had formerly been done, and describing a different mode as the improvement claimed.²

¹ Seymour v. Osborne, 11 Wall. 516.

² In Hill v. Thompson, Webs. Pat. Cas. 226, 228, 229, the specification contained among other things the following claim: "And that my said improvements do further consist in the use and application of lime to iron subsequently to the operations of the blast furnace, whereby that quality in iron from which the iron is called 'cold short,' howsoever and from whatever substance such iron be obtained, is sufficiently prevented or remedied, and by which such iron is rendered more tough when cold. . . . And I do further declare, that I have discovered that the addition of lime or limestone, or other substances consisting chiefly of lime, and free or nearly free from any ingredient known to be hurtful to the quality of iron, will sufficiently prevent or remedy that quality in iron from which the iron is called 'cold short,' and will render such iron more tough when cold; and I do, for this purpose, if the iron, howsoever and from whatever substance the same may have been obtained, be expected to prove 'cold short,' add a portion of lime or limestone, or of the other said substances, of which the quantity must be regulated by the quality of the iron to be operated upon, and by the quality of the iron wished to be produced; and further, that the said lime or limestone, or other aforesaid sub-

§ 241. But in describing the improvement of a machine in use and well known, it is not necessary to state in detail the structure of the entire and improved machine. It is only necessary to describe the improvement, by showing the parts of which it consists, and the effects which it produces.¹ In the case of machinery there is a particular requisition in the statute, designed to insure fulness and clearness in the specification. "And in

stances, may be added to the iron at any time subsequently to the reduction thereof, in the blast furnace, and prior to the iron becoming clotted, or coming into nature, whether the same be added to the iron while it is in the refining or in the puddling furnace, or in both of them, or previous to the said iron being put into either of the said furnaces." It appeared that "cold short" had been prevented by the use of lime before; and Dallas, J., said: "The purpose is to render bar iron more tough, by preventing that brittleness which is called 'cold short,' and which renders bar iron less valuable; the means of prevention stated are the application of lime. In what way, then, is lime mentioned in the patent? The first part of the specification, in terms, alleges certain improvements in the smelting and working of iron, during the operations of the blast furnace; and then, introducing the mention of lime, it states, that the application of it to iron, subsequently to the operation of the blast furnace, will prevent the quality called 'cold short.' So far, therefore, the application of lime is in terms claimed as an improvement, and nothing is said of any previous use, of which the use proposed is averred to be an improvement; it is, therefore, in substance a claim of entire and original discovery. The recital should have stated, supposing a previous use to be proved in the case, that, 'whereas lime has been in part, but improperly, made use of,' &c., and then a different mode of application and use should have been suggested as the improvement claimed. But the whole of the patent must be taken together, and this objection will appear to be stronger as we proceed. And here again, looking through the patent, in a subsequent part of the specification, the word 'discovery' first occurs, and I will state the terms made use of in this respect. 'And I do further declare, that I have discovered that the addition of lime will prevent that quality in iron from which the iron is called "cold short," and will render such iron more tough when cold; and that for this purpose I do add a portion of lime or limestone, to be regulated by the quantity of iron to be operated upon, and by the quality of the iron to be produced, to be added at any time subsequently to the reduction in the blast furnace, and this from whatever substance the iron may be produced, if expected to prove "cold short."' Now this appears to be nothing short of a claim of discovery, in the most extensive sense, of the effect of lime applied to iron to prevent brittleness, not qualified and restrained by what follows, as to the preferable mode of applying it under various circumstances, and therefore rendering the patent void, if lime had been made use of for this purpose before, subject to the qualification only of applying it subsequently to the operation in the blast furnace."

¹ Brooks v. Bicknell, 3 M'Lean's R. 250, 261.

case of any machine, he (the patentee) shall fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.”¹ By the principle of a machine, as used in this clause of the statute, is to be understood the peculiar structure and mode of operation of such machine;² or, as the statute itself explains it, the character by which it may be distinguished from other inventions. By explaining “the several modes in which he has contemplated the application of that principle,” the statute is presumed to direct the patentee to point out all the modes of applying the principle, which he claims to be his own invention, and which he means to have covered by his patent, whether they are those which he deems the best, or are mere formal variations from the modes which he prefers. In other words, he is to state not only the peculiar device or construction which he deems the best for producing the new effect, exhibited in his machine, but also all the other modes of producing the same effect, which he means to claim as being substantially applications of the same principle. But in doing this, it is not, as we have seen, necessary for him to enter into a minute description of the mode of producing those variations of structure which he thus claims, in addition to the structure which he prefers. It is sufficient, if he indicates what variations of the application of the principle he claims beyond those which he deems the best.³

§ 242. The duty of determining what the claim of the patentee involves the necessity of determining whether the description in the specification discloses a patentable subject. The real invention may be a patentable subject; but at the same time it may be claimed in such a way as to appear to be a mere function, or abstract principle, which it will be the duty of the court to declare is not patentable; whereas, if it had been described differently, it would have been seen to be a claim for a principle or

¹ Act of July 4, 1836, § 6.

² *Whittemore v. Cutter*, 1 Gallis. 478, 480; *Barrett v. Hall*, 1 Mas. 447, 470.

³ See the observations of Mr. Justice Story, cited *ante*, from the case of *Carver v. The Braintree Manuf. Company*, 2 Story's R. 432, 440.

function embodied in a particular organization of matter for a particular purpose, which is patentable. The patentee may have been engaged in investigations into the principles of science or the laws of nature. He may have attained a result, which constitutes a most important and valuable discovery, and he may desire to protect that discovery by a patent; but he cannot do so by merely stating his discovery in a specification. He must give it a practical application to some useful purpose, to attain a result in arts or manufactures not before attained, and his specification must show the application of the principle to such a special purpose, by its incorporation with matter in such a way as to be in a condition to produce a practical result.¹ Care should be taken,

¹ In the *Househill Company v. Neilson*, Webs. Pat. Cas. 673, 683, Lord Justice Clerk Hope, in the Court of Sessions, made the following clear observations to the jury: "It is quite true that a patent cannot be taken out solely for an abstract philosophical principle, — for instance, for any law of nature, or any property of matter, apart from any mode of turning it to account in the practical operations of manufacture, or the business and arts and utilities of life. The mere discovery of such a principle is not an invention in the patent-law sense of the term. Stating such a principle in a patent may be a prolongation of the principle, but it is no application of the principle to any practical purpose. And without that application of the principle to a practical object and end, and without the application of it to human industry, or to the purposes of human enjoyment, a person cannot in the abstract appropriate a principle to himself. But a patent will be good, though the subject of the patent consists in the discovery of a great, general, and most comprehensive principle in science or law of nature, if that principle is by the specification applied to any special purpose, so as thereby to effectuate a practical result and benefit not previously attained.

"The main merit, the most important part of the invention, may consist in the conception of the original idea, — in the discovery of the principle in science, or of the law of nature stated in the patent, and little or no pains may have been taken in working out the best manner and mode of the application of the principle to the purpose set forth in the patent. But still, if the principle is stated to be applicable to any special purpose, so as to produce any result previously unknown, in the way and for the objects described, the patent is good. It is no longer an abstract principle. It comes to be a principle turned to account to a practical object, and applied to a special result. It becomes, then, not an abstract principle, which means a principle considered apart from any special purpose or practical operation, but the discovery and statement of a principle for a special purpose, that is, a practical invention, a mode of carrying a principle into effect. That such is the law, if a well-known principle is applied for the first time to produce a practical result for a special purpose, has never been disputed. It would be very strange and unjust to refuse the

therefore, in drawing specifications, not to describe the invention as a mode or device for producing an effect, detached from machinery, or from the particular combination or use of matter, by which the effect is produced.¹ The danger in such cases is, that the claim will appear to be a claim for an abstract principle, or for all possible modes of producing the effect in question, instead of being, what alone it should be, a claim for the particular application of the principle which the patentee professes to have made.

Where a party has discovered a new application of some property in nature never before known or in use, by which he has produced a new and useful result, the discovery is the subject of a patent, independent of any peculiar or new arrangement of machinery for the purpose of applying the new property.²

same legal effect, when the inventor has the additional merit of discovering the principle as well as its application to a practical object. The instant that the principle, although discovered for the first time, is stated, in actual application to, and as the agent of, producing a certain specified effect, it is no longer an abstract principle, it is then clothed with the language of practical application, and receives the impress of tangible direction to the actual business of human life.”

¹ Barrett v. Hall, 1 Mas. 476.

² Foote v. Silsby, 2 Blatchf. 260. “There has been some difference of opinion as regards the true construction to be given to the first claim, and it will therefore be necessary for the court to call your attention particularly to this branch of the case. It will be seen that the patentee, after he has set forth, in general terms, that he has made a new and useful improvement in regulating the heat of stoves, has set forth with great particularity two modes by which he adapts this improvement to use, through the arrangement of various machinery; and that then, in this first claim, he claims the application of the expansive and contracting power of a metallic rod, by different degrees of heat, to open and close a damper which governs the admission of air into a stove in which it may be used, by which a more perfect control over the heat is obtained than can be by a damper in the flue. Now, it is the application of the expansive and contracting power of the metallic rod to regulate the heat of the stove by opening and closing the damper, the whole being self-acting in the admission or exclusion of air, that is specifically claimed in this part of the patent; and, according to the construction I give to it and have always given to it, it is a claim independent of any particular arrangement or combination of machinery or contrivance for the purpose of applying the principle to the regulation of the heat of stoves. I have always supposed, therefore, that the peculiar arrangement or construction of machinery did not enter into this branch of the claim. Where a party has described a new application of some property in nature, never before known or in use, by which he has produced

A claim for a combination of several devices, so combined as to produce a particular result, is not good as a claim for any mode of combining such devices.¹

a new and useful result, the discovery is the subject of a patent, independent of any new or peculiar arrangement of machinery for the purpose of applying the new property in nature ; and hence the inventor has a right to use any means, old or new, in the application of the new property to produce the new and useful result, to the exclusion of all other means. Otherwise a patent would afford no protection to an inventor in cases of this description ; because, if the means used by him for applying his new idea must necessarily be new, then, in all such cases, the novelty of the arrangement used for the purpose of effecting the application would be involved in every instance of infringement, and the patentee would be bound to make out, not only the novelty in the new application, but also the novelty in the machinery employed by him in making the application. (Then citing from *Neilson v. Harford*, the judge (Nelson) continues) : Now in this case, as I understand the claim of the patentee, he claims the application of the principle of expansion and contraction in a metallic rod to the purpose of regulating the heat of a stove. This is the new conception which he claims to have struck out ; and, although the mere abstract conception would not have constituted the subject-matter of a patent, yet when it is reduced to practice by any means, old or new, resulting usefully, it is the subject of a patent, independently of the machinery by which the application is made. I think, therefore, that in examining the first question presented to you, you may lay altogether out of view the contrivance by which the application of the principle is made, and confine yourselves to the original conception of the idea carried into practice by some means ; but whether the means be old or new is immaterial, for although old means be used for giving application to the new conception, yet the patent excludes all persons other than the patentee from the use of those means and of all other means in a similar application." This opinion was sustained on appeal to the Supreme Court, in *Silsby v. Foote*, 20 How. 373, where, however, Judge Grier delivered a strong dissenting opinion, based on the grounds of the decision rendered under the eighth claim of Morse's patent. *O'Reilly v. Morse*, 15 How. 62. Judge Taney, in giving that decision, says : " *Eighth*. I do not propose to limit myself to the specific machinery or parts of machinery described in the specification ; the essence of my invention being the use of the motive-power of the electric or galvanic current, which I called electro-magnetism, however developed, for marking or printing intelligible characters, signs, or letters, at any distances, being a new application of that power of which I claim to be first inventor or discoverer.' Now, the provisions of the acts of Congress in relation to patents may be summed up in a few words. Whoever discovers that a certain useful result will be produced in any art, machine,

¹ Case *v. Brown*, 2 Wall. 320.

§ 242 *a*. A claim for a result will not be sustained; it must be for the means or apparatus by which such result is produced. And where such claim was, "in effect, a claim to the use of the proper chemicals to precipitate the metal from the liquid waste solution, by putting such chemicals into any proper vessel containing the solution," it was held to be too general and vague, and therefore invalid.¹

A claim which might otherwise be held to be bad as covering a function, or result, when containing the words "substantially as described," or "substantially as set forth," must be construed in connection with the specification, and may be held valid. Where the claim immediately follows the description of the invention, it may be construed in connection with the explanations contained in the specifications, and where it contains words referring back to the specifications, it cannot properly be construed in any other way.²

§ 243. According to the terms of the Patent Act, in cases manufacture, or composition of matter, by the use of certain means, is entitled to a patent for it; provided he specifies the means used in a manner so full and exact that any one skilled in the science to which it appertains can, by using the means he specifies, without any addition to or subtraction from them, produce precisely the result he describes. And if this cannot be done by the means he describes, the patent is void. And if it can be done, then the patent confers on him the exclusive right to use the means he specifies to produce the result or effect he describes, and nothing more. And it makes no difference, in this respect, whether the effect is produced by chemical agency or combination, or by the application of discoveries or principles in natural philosophy known or unknown before his invention, or by machinery acting altogether on mechanical principles. In either case, he must describe the manner and process as above-mentioned, and the end it accomplishes. And any one may lawfully accomplish the same end without infringing the patent, if he uses means substantially different from those described. Indeed, if the eighth claim of the patentee can be maintained, there was no necessity for any specification further than to say that he had discovered that, by using the motive power of electro-magnetism, he could print intelligible characters at any distance. We presume it will be admitted on all hands that no patent could have issued on such a specification. Yet this claim can derive no aid from the specification filed. It is outside of it, and the patentee claims beyond it. And if it stands, it must stand simply on the ground that the broad terms above-mentioned were a sufficient description, and entitled him to a patent in terms equally broad. In our judgment, the act of Congress cannot be so construed."

¹ *The Shaw & Wilcox Company v. Lovejoy* (1870), 7 Blatchf. 232.

² *Seymour v. Osborne*, 11 Wall. 516.

where the invention falls within the category of machines, a patent must be granted for it (the machine) and not for a "mode of operation," "principle," "idea," or other abstraction.¹

This is well illustrated by several cases. In one, the invention claimed was "the communication of motion from the reed to the yarn-beam, in the connection of the one with the other, which is produced as follows," describing the mode. The patent was sustained, only by construing it as a claim for the specific machinery invented by the patentee for the communication of motion from the reed to the yarn-beam, specially described in the specification. As a claim for all possible modes of communicating the motion, &c., it would have been utterly void.² In another case, a patent "for an improvement in the art of making nails, by means of a machine which cuts and heads the nails at one operation," was seen at once not to be a grant of an abstract principle, but of a combination of mechanical contrivances operating to produce a new effect, and constituting an improvement in the art of making nails.³ So, too, where the patentee, in a patent for a machine for turning irregular forms, claimed "the method or mode of operation in the abstract explained in the second article, whereby the infinite variety of forms, described in general terms in this article, may be turned or wrought," and the second article in his specification explained the structure of a machine by which that mode of operation was carried into effect, and the mode of constructing such a machine so as to effect the different objects to be accomplished, it was held that the specification did not claim an abstract principle or function, but a machine.⁴ So,

¹ *Burr v. Duryea*, 1 Wall. 531, *vide infra*, p. 264.

² *Stone v. Sprague*, 1 Story's R. 270.

³ *Gray v. James*, Peters's C. C. R. 394.

⁴ *Blanchard v. Sprague*, 2 Story's R. 164, 170. In this case, Mr. Justice Story said: "Looking at the present specification, and construing all its terms together, I am clearly of opinion, that it is not a patent claimed for a mere function; but it is claimed for the machine specially described in the specification; that is, for a function as embodied in a particular machine, whose mode of operation and general structure are pointed out. In the close of his specification, the patentee explicitly states that his 'invention is described and explained in the second article of his specification, to which reference is made for information of that which constitutes the principle or character of his machine or invention, and distinguishes it, as he verily believes, from all other machines, discoveries, or inventions known or used

also, it has been held that the making of wheels on a particular principle which is described in the specification is the subject of a patent; ¹ and where the plaintiff claimed as his invention “the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acts as a counterbalance to the pressure against the back of such chair, as above described,” it was held not to be a claim to a principle, but to an application to a certain purpose and by certain means.²

before.” Now, when we turn to the second article, we find there described, not a mere function, but a machine of a particular structure, whose modes of operation are pointed out, to accomplish a particular purpose, function, or end. This seems to me sufficiently expressive to define and ascertain what his invention is. It is a particular machine, constituted in the way pointed out, for the accomplishment of a particular end or object. The patent is for a machine, and not for a principle or function detached from machinery.” *Blanchard’s Gunstock Turning Factory v. Warner*, 1 Blatchf. 259.

¹ *Jones v. Pearce*, Webs. Pat. Cas. 123.

² *Minter v. Wells*, Webs. Pat. Cas. 135. “Godson, in pursuance of leave reserved, moved for a nonsuit, on the ground that the specification is for a principle, the plaintiff having summed up the whole of his patent in his claim to the principle, and not to any particular means. Either the plaintiff claims a principle, or he does not; to the former he is not entitled; and as to the latter, the defendant has not used the mechanical means of the plaintiff.” [Lord Lyndhurst, C. B.: He says, “What I claim as my invention is the application of a self-adjusting leverage to the back and seat of a chair, whereby the weight on the seat acts as a counterbalance to the pressure against the back of such chair, as above described.” This is what he claims, a self-adjusting leverage acting in that way. Then he points out the particular mode in which that is effected. The question, therefore, is, whether you have infringed that particular method.] [Alderson, B.: All the witnesses proved that there never had been a self-adjusting leverage in a chair before.] That I admit, and contend that this case is nearly the same as *K. v. Cutler*, (1 Stark. 354; Webs. Pat. Cas. 76, n.) [Lord Lyndhurst, C. B.: He says, “I claim the application of a self-adjusting leverage to the back and seat of a chair,” so as to produce such an effect.] Yes, my lord, that effect being nothing more than the motion of a lever backwards and forwards, producing such an effect. [Lord Lyndhurst, C. B.: It is the application of a self-adjusting leverage to the back and seat of a chair, he having described what that self-adjusting leverage was before. Any application of a self-adjusting leverage to the back and seat of a chair producing this effect, that the one acts as a counterbalance to the pressure against the other, would be an infringement of this patent, but nothing short of that.] [Alderson, B.: The difference between this chair and all others, as it appeared in evidence, was very well described by Mr. Brunton; he says, this chair acts (looking at the one you produced), — this chair acts, but not by a self-adjusting leverage.

§ 244. But, on the other hand, a claim to a principle, to be carried into effect by any means, without describing an application of the principle by some means, is a claim to the abstract principle. As, where a specification stated that "it is claimed as new, to cut ice of a uniform size by means of an apparatus worked by any other power than human," it was held that this claim to the art of cutting ice by means of any other power than human was utterly void.¹ It is, therefore, essential that the specification should describe some practical mode of carrying the principle into effect; and then the subject-matter will be patentable, because it will be, not the principle itself, but the mode of carrying it into effect; and on the question of infringement it will be for the jury to say whether another mode of carrying it into

By pressing on the back the seat rises, and *vice versa*, by pressing on the seat the back rises; that is what he calls a self-adjusting leverage. In the other case, you might sit for ever, and the back would never rise.] The plaintiff, by his specification, has appropriated to himself a first principle in mechanics, viz., the lever, and therefore nobody else may use it. [Lord Lyndhurst, C. B.: It is not a leverage only, but the application of a self-adjusting leverage; and it is not a self-adjusting leverage only, but it is a self-adjusting leverage producing a particular effect, by the means of which the weight on the seat counterbalances the pressure against the back.] This is nothing more than one of the first principles of mechanics. [Parke, B.: But that, not being in combination before, can that not be patented? It is only for the application of a self-adjusting leverage to a chair, — cannot he patent that? He claims the combination of the two, no matter in what shapes or way you combine them; but if you combine the self-adjusting leverage, which he thus applies to the subject of a chair, that is an infringement of his patent.] What is the combination? [Lord Lyndhurst, C. B.: Why the application of a self-adjusting leverage producing a particular effect. He says, I do not confine myself to the particular shape of this lever.] If your lordships translate this to mean machine, of course I have no further argument to urge. [Lord Lyndhurst, C. B.: It is every machine consisting of a self-adjusting leverage producing that particular effect in a chair.] That is the extent to which I am putting it. If your lordships say you can, in favor of the patentee, so read it, that it is the machine and the combination only that the plaintiff has claimed, then I should be wasting your lordships' time if I argued the matter further. [Lord Lyndhurst, C. B.: Substantially that combination.] [Parke, B.: Therefore a chair made upon that principle which you have directed to be constructed here, would be an infringement of his patent, that is, the application of a self-adjusting leverage to a chair, such a one as you have produced here to-day.] [Lord Lyndhurst, C. B.: It has the particular effect.] Rule refused.

¹ *Wyeth v. Stone*, 1 Story's R. 273, 285.

effect is not a colorable imitation of the mode invented by the patentee.¹ Hence a claim, construed to include every improvement in which the motive-power is the electric or galvanic current, and the result is the marking or printing of intelligible characters at a distance, is broader than the patent laws allow, and invalid.²

§ 245. This being the case, the question next arises whether it is necessary, after having described the application of the principle by some mechanical contrivance, or other arrangement of matter, to claim in the specification all the other forms of apparatus, or modifications of matter, by which the principle may also be applied in order to produce the same beneficial effect, or whether the patent does not cover all these, without particular description, by covering the application of the principle. When we consider that the subject-matter of such a patent is the application of the principle effected by means of some machinery, or other arrangement, it will be apparent that the reason why the patentee is bound to describe some machinery or practical method of making the application, is in order to show that he has actually applied the principle, and to enable others to do so after him. But the real subject of the patent is the practical application of the principle; and hence, although the means by which the patentee has made that application must be described, in order to

¹ In *Neilson v. Harford*, Webs. Pat. Cas. 342, Alderson, B., said: "I take the distinction between a patent for a principle and a patent which can be supported, is, that you must have an embodiment of the principle in some practical mode described in the specification of carrying the principle into actual effect, and then you take out your patent, not for the principle, but for the mode of carrying the principle into effect. In Watt's patent, which comes the nearest to the present of any you can suggest, the real invention of Watt was, that he discovered that by condensing steam in a separate vessel a great saving of fuel would be effected by keeping the steam cylinder as hot as possible, and applying the cooling process to the separate vessel, and keeping it as cool as possible, whereas, before, the steam was condensed in the same vessel; but then Mr. Watt carried that practically into effect by describing a mode which would effect the object. The difficulty which presses on my mind here is, that this party has taken out a patent, in substance like Watt's, for a principle, that is, the application of hot air to furnaces, but he has not practically described any mode of carrying it into effect. If he had, perhaps he might have covered all other modes, as being a variation."

² *O'Reilly v. Morse*, 15 How. 62. For an elaborate discussion of this claim, see chapter on Extent of Principle.

show that he has done what he says he has done, and to enable others to do what he says can be done, yet a variation of the means and machinery, if it produces the same beneficial effect, that is, is the same application of the same principle, does not show that the party making such variation has not infringed the patent, by making use of that which exclusively belonged to another, viz., the application of the principle to produce a particular effect.

§ 246. Examples will best illustrate this distinction. Minter's patent, for a self-adjusting chair, which has been already referred to, was a case of the application of a well-known principle, that of the lever, for the first time applied to a chair. He made no particular claim of shape or form for the construction of the chair, but showed that if a lever was applied to the back of the chair, so that the weight of the seat would act as a counterpoise to the back, in whatever posture the occupant might be sitting or reclining, a self-adjusting chair would be obtained. Now, there might be various modes of constructing a chair on this principle; but as the constructing of chairs on this principle was the true subject of the patent, the court held the making of any chair upon the same principle of a self-adjusting leverage was an infringement.¹

§ 247. Neilson's patent involved the principle of blowing furnaces, for the smelting of iron, with a blast of hot air, instead of cold, and he applied that principle by finding out a mode by which air may be introduced in a heated state into the furnace, viz., by heating the air in a closed vessel between the blowing apparatus and the furnace. The specification, after stating that the air, heated up to red heat, may be used, but that it is not necessary to go so far to produce a beneficial effect, proceeded to state that the size of the receptacle would depend on the blast necessary for the furnace, and gave directions as to that. It then added, "The shape of the receptacle is immaterial to the effect, and may be adapted to local circumstances." After great consideration, it was held that the word "effect" was not meant to apply to the degree of heat to be given to the air in the heating receptacle, but that any shape of the heating receptacle would produce the beneficial effect of passing heated air into the fur-

¹ Minter v. Wells, Webs. Pat. Cas. 134.

nace. This construction settled what the patent was for, viz., the application of the principle of blowing with hot air, by means of a vessel in which the air should be heated on its passage from the blowing apparatus to the furnace. Consequently the subject-matter embraced all the forms of apparatus by which the application of the same principle could be effected.¹

¹ Neilson v. Harford, Webs. Pat. Cas. 295, 369. The same patent was litigated in Scotland, and, upon the point of the generality of the claim as regards the forms of the apparatus, Lord Justice Clerk Hope made the following observations to the jury: "Is it any objection, then, in the next place, to such a patent, that terms descriptive of the application to a certain specified result include every mode of applying the principle or agent so as to produce that specified result, although one mode may not be described more than another, — although one mode may be infinitely better than another, — although much greater benefit would result from the application of the principle by one method than by another, — although one method may be less expensive than another? Is it, I next inquire, an objection to the patent, that, in its application of a new principle to a certain specified result, it includes every variety of mode of applying the principle according to the general statement of the object and benefit to be attained? You will observe, that the greater part of the defenders' case is truly directed to this objection. This is a question of law, and I must tell you distinctly, that this generality of claim, that is, for all modes of applying the principle to the purpose specified, according to or within a general statement of the object to be attained, and of the use to be made of the agent to be so applied, is no objection whatever to the patent. That the application or use of the agent for the purpose specified may be carried out in a great variety of ways, only shows the beauty and simplicity and comprehensiveness of the invention. But the scientific and general utility of the proposed application of the principle, if directed to a specified purpose, is not an objection to its becoming the subject of a patent. That the proposed applications may be very generally adopted in a great variety of ways, is the merit of the invention, not a legal objection to the patent.

"The defenders say, you announce a principle that hot air will produce heat in the furnace; you direct us to take the blast without interrupting, or rather without stopping it, to take the current in blast, to heat it after it leaves the blast, and to throw it hot into the furnace. But you tell us no more, — you do not tell us how we are to heat it. You say you may heat in any way, in any sort of form of vessel. You say, I leave you to do it how you best can. But my application of the discovered principle is, that if you heat the air, and heat it after it leaves the blowing engine (for it is plain you cannot do it before), you attain the result I state: that is the purpose to which I apply the principle. The benefit will be greater or less; I only say, benefit you will get, I have disclosed the principle; I so apply it to a specified purpose by a mechanical contrivance, viz., by getting the heat when in blast, after it leaves the furnace; but the mode and manner and extent of heating I leave to you, and the degree of benefit, on that very account, I do not state. The defenders say,

§ 248. In this case, it was also laid down by Parke, B., to the jury, that the omission to mention in the specification any thing

the patent, on this account, is bad in law. I must tell you, that taking the patent to be of this general character, it is good in law. I state to you the law to be, that you may obtain a patent for a mode of carrying a principle into effect; and if you suggest and discover, not only the principle, but suggest and invent how it may be applied to a practical result by mechanical contrivance and apparatus, and show that you are aware that no particular sort or modification or form of the apparatus is essential in order to obtain benefit from the principle, then you may take your patent for the mode of carrying it into effect, and you are not under the necessity of describing and confining yourself to one form of apparatus. If that were necessary, you see, what would be the result? Why, that a patent could hardly ever be obtained for any mode of carrying a newly discovered principle into practical results, though the most valuable of all discoveries. For the best form and shape or modification of apparatus cannot, in matters of such vast range, and requiring observation on such a great scale, be attained at once; and so the thing would become known, and so the right lost, long before all the various kinds of apparatus could be tried. Hence you may generally claim the mode of carrying the principle into effect by mechanical contrivance, so that any sort of apparatus applied in the way stated will, more or less, produce the benefit, and you are not tied down to any form.

“ The best illustration I can give you — and I think it right to give you this illustration — is from a case as to the application of that familiar principle, the lever, to the construction of chairs, or what is called the self-adjusting lever. (Minter's Patent, Webs. Pat. Cas. 126 and 134.) This case, which afterwards came under the consideration of the whole court, was tried in the Court of Exchequer during the presidency of Lord Lyndhurst. The case was as to the patent reclining chair, the luxury of which some of you may have tried; it had a self-adjusting lever, so that a person sitting or reclining, — and I need not tell you what variety of postures can be assumed by a person reclining in a chair, — in whatever situation he placed his back, there was sufficient resistance offered through means of the lever to preserve the equilibrium. Now any thing more general than that I cannot conceive; it was the application of a well-known principle, but for the first time applied to a chair. He made no claim to any particular parts of the chair, nor did he prescribe any precise mode in which they should be made; but what he claimed was a self-adjusting lever to be applied to the back of a chair, where the weight of the seat acts as a counterpoise to the back, in whatever posture the party might be sitting or reclining. Nothing could be more general. Well, a verdict passed for the patentee, with liberty to have it set aside; but Lord Lyndhurst and the rest of the court held, that this was not a claim to a principle, but to the construction of a chair on this principle, in whatever shape or form it may be constructed. (Minter v. Wells, Webs. Pat. Cas. 134.) Just so as to the hot blast, only the principle is also new. The patentee says, ‘ I find hot air will increase the heat in the furnace, that a blast of hot air is beneficial for that end.’ Here is the

which the patentee knows to be necessary for the beneficial enjoyment of the invention is a fatal defect; but the omission to mention something which contributes only to the degree of benefit, provided the apparatus would work beneficially and be worth adopting, is not a fatal defect.¹

§ 249. As it is the duty of the court to determine on the construction of the patent, what the subject-matter is, it is often necessary to decide whether the patentee claims a combination of several things, or the distinct invention of several things or both. General principles cannot be laid down for the determination of questions of this kind, depending exclusively on the particular facts. There is, however, one circumstance that will always be decisive in construing a patent against a claim for the several things described in the specification, and that is, that one or more of them is not new. If this turns out to be the case, the question may then be, whether the patent can be sustained for the combination.² In determining this question it is to be observed, that a patent for a combination of three things cannot at the same time be a patent for a combination of any two of them. If the subject-matter is the combination of any given number of things, or processes, or parts, no portion of the combination less than the whole can be considered at the same time as being also the subject-matter.³

For instance, where letters-patent were granted for "improvement to attain it, 'heat the air under blast, between the blowing apparatus and the furnace; if you do that, I care not how you may propose to do it, I neither propose to you nor claim any special mode of doing it; you may give the air more or less degrees of heat, but if you so heat it, you will get by that contrivance the benefit I have invented and disclosed, more or less, according to the degree of heat.' This is very simple, very general, but its simplicity is its beauty and its practical value,—not an objection in law." *The Househill Company v. Neilson*, Webs. Pat. Cas. 684, 686.

¹ *Neilson v. Harford*, Webs. Pat. Cas. 317.

² For some of the cases where the question has been between a combination or a claim for several distinct things, see *Howe v. Abbott*, 2 Story's R. 190; *Ames v. Howard*, 1 Sumner, 482; *Prouty v. Ruggles*, 16 Peters, 336; s. c. *Prouty v. Draper*, 1 Story, 568; *Pitts v. Whitman*, 2 Story's R. 609; *Carver v. Braintree Manuf. Company*, 2 Story's R. 432; *Buck v. Hermance*, 1 Blatchf. 398.

³ *Prouty v. Draper*, 1 Story, 568, 572; s. c. *Prouty v. Ruggles*, 16 Peters, 336; *Winans v. Schenectady & Troy R.R.*, 2 Blatchf. 279.

ments in agricultural machines," and the specification described them as for "the constructing and placing of holding fingers, cutting blades, and gathering reels respectively, in a manner described, and the embodiment of these parts so constructed and placed, all or any of them, in machines for reaping purposes." it was held that the patent was for the combination, and that the use of a knife alone, similar to that described in the patented machine, was not an infringement.¹

§ 249 *a*. In the case of *Blake v. Stafford*, the specification in the original patent contained the following general description of the mechanism: —

"My stone-breaker, so far as respects its principle, or its essential characteristics, consists of a pair of jaws, one fixed and the other movable, between which the stones are to be broken, having their acting faces nearly in an upright position, and convergent downward one toward the other, in such manner that while the space at the top is such as to receive the stones that are to be broken, that at the bottom is only sufficient to allow the fragments to pass when broken to the required size, and giving to the movable jaw a short and powerful vibration through a small space, say one-fourth of an inch, more or less. By means of this form and arrangement of the jaws, and this motion of the movable jaw, when a stone is dropped into the space between them, it falls down until its further descent is arrested between their convergent faces; the movable jaw, advancing, crushes it, then receding liberates the fragments, and they again descend, and, if too large, are again crushed, and so on until all the fragments, having been sufficiently reduced, have passed out through the narrow space at the bottom. The details of the structure of the machine, other than those already specified, relating to the manner of supporting the jaws in their proper relative position, and giving motion with the required power to the movable jaw, may be varied indefinitely without affecting its principle of operation."

In the reissue, dated January 9, 1866, this general description was enlarged so as to include a revolving shaft, and the claim was as follows: "1. The combination in a stone-breaking machine of the upright, convergent jaws with a revolving shaft

¹ *McCormick v. Gray*, 4 *Law Times*, n. s. 832.

and mechanism for imparting a definite reciprocating movement to one of the jaws from the revolving shaft, the whole being and operating substantially as set forth; 2. The combination in a stone-breaking machine of the upright movable jaw with the revolving shaft and fly-wheel, the whole being and operating substantially as set forth; 3. In combination with the upright, converging jaws and revolving shaft, imparting a definitely limited vibration to the movable jaw, so arranging the jaws that they can be set at different distances from each other at the bottom, so as to produce fragments of any desired size."

This specification was objected to by the defendant as being "vague, ambiguous, and uncertain," and as not describing with sufficient certainty the invention claimed or the manner of making the machine.

In pronouncing in favor of the validity of this specification, Judge Shipman said: "The whole claim, when read in the light of the specification and drawings, discloses plainly the organized mechanism which the inventor has patented. It consists of two strong, upright, or nearly upright, convergent jaws, fixed in a suitable frame, one of the jaws being stationary, and the other movable, the movable jaw being connected with a revolving shaft and mechanism, whereby, when the motive power is applied, a definite reciprocating and vibratory movement is imparted to the movable jaw by which it alternately advances and recedes from the fixed jaw, crushing the stones as it advances and liberating them as it recedes, so that they drop out from between the bottom of the jaws of a size substantially determined by the distance by which they are separated when the movable jaw is drawn back. This distance, and consequently the size of the fragments, may be varied by adjusting the machine as described in the specification."¹

§ 249 b. In the case of *Railroad Company v. Dubois*, the issue was whether the patent was for a process or a device. The invention consisted of "a new and useful improvement in the mode of building piers for bridges and other structures and setting the same." To enable his invention to be practised, the patentee gave a full description of a floating caisson, or cofferdam, with all the details of its construction, and also of guide-

¹ *Blake v. Stafford*, 6 Blatchf. 195; s. c. 3 Fisher's Pat. Cas. 294.

piles, with a mode for their use in directing the coffer-dam in its descent with the pier to the foundation. He then added, "I have given a minute description of means for carrying out my invention, but I do not wish to be confined to those means, but desire to be protected in the principle of operation embodied in a floating coffer-dam, substantially as described, for building and setting piers for bridges and other structures."

The patentee then claimed: "1st, Building and setting piers by means of a floating coffer-dam, substantially as set forth; 2d. The use of the tube which constitutes the dam for incasing and strengthening the pier, substantially as set forth; 3d, the guide-piles (AA) in combination with a floating coffer-dam, substantially as and for the purpose set forth."

At the trial it became material to determine for what invention the patent was granted, and especially what construction should be given to the first claim. The defendant asked the court to rule that the first claim was for a *process* of building and setting piers, and that unless the defendants had used that *process* the complainants could not recover. The court construed the claim to be, not for a process, but for a device or instrument to be employed in a process. the instrument being a floating coffer-dam, constructed as described in the specification, in which the masonry of the pier might be laid and sunk to the foundation by its own gravity; and therefore refused to give the instruction. This construction was held to be correct by the Supreme Court of the United States, when the matter came before them on appeal.¹

¹ Railroad Company v. Dubois, 12 Wall. 47. In construing the second and third claims, the court below thus charged, which was held to be correct by the Supreme Court: "The second claim of the plaintiff's patent is for the use of the tube or material of which the dam is made for incasing and strengthening the pier; that is, it shall be so constructed that it can be used for the casing and strengthening the pier, no matter whether it be first placed in position entire, or be built in sections as the masonry progresses.

"The third claim of the plaintiff's patent is for a combination of a floating coffer-dam, as claimed in the first claim, with guide-piles, which are driven into the bottom of the river, around the site of the proposed pier, and reach above the surface of the water, and pass through holes in the platform, and have their tops framed together with ties; when the pier is building, they are to sustain and keep upright the tube with its pier inside, and to guide it down to its foundation prepared at the bottom of the river; when the pier is finished,

§ 249 c. In the case of *Coffin v. Ogden*,¹ the invention consisted in an improvement in locks and knob latches. The claims of the patent were two in number: 1. So dividing the hub or follower, and so combining the same with a reversible latch, that the arms, or their equivalents, of the divided hub or follower, may be released, for the purpose of allowing the latch to be reversed or turned. This was held to be not a claim for a result, and therefore bad, but “a claim to dividing the hub or follower in substantially the manner described by the patentee, and to combining the hub so divided with a reversible latch in substantially the manner described by the patentee, the arms of the hub being released in substantially the manner described by the patentee for the purpose of allowing the latch to be reversed.” 2. So constructing and arranging the individual parts of a divided hub or follower, that the reversal or turning of the latch is prevented only by the presence of the spindle within the lock. This was held to be a “claim to constructing and arranging the individual parts of the divided hub in substantially the manner described by the patentee, the reversal of the latch being prevented only by the presence of the spindle in the lock in substantially the manner described by the patentee.”

§ 249 d. In the case of *Clark v. Bousfield*, letters-patent had been granted for a new and useful improvement in machines for graining pails, and other analogous uses. The invention consisted in constructing an elastic bed, containing the impression of the device to be grained upon the pail, in separate panels, each of different design, so that by moving the pail over it the various designs would be stamped upon the staves, thus giving them the appearance of different kinds of wood. The instrument or machine described for this purpose was a box or bed, which might be constructed of wood or iron, or other suitable material, and the office of which was to hold the elastic material, whether of rubber or leather, or the compound of glue and molasses, such as is used for printers' rollers, which was preferred.

Having described the apparatus and the process, the patentees set forth their claims, the first two of which were:—

they are then to be cut off just above the top of the platform, and their stumps left to prevent any lateral movement of the platform and pier on its foundation.”

¹ (1869), 3 Fisher's Pat. Cas. 640.

“First. We claim constructing the bed of the elastic material used in graining machines, in the form herein shown, substantially as and for the purposes specified.

“Second. We claim arranging the elastic material aforesaid, whether curved or rectangular in form, in a series of distinct staves or designs, substantially as and for the purposes herein shown and set forth.”

On behalf of the defendant, it was maintained that the second claim was for a *design* to be impressed on the bed, and was therefore patentable under the eleventh section of the act of 1861, and not under that of 1836. The patent was therefore void, as containing a claim for a machine and a claim for a design, which two things were patentable under different acts, and for different terms of time. Upon this question, whether the second claim was for any thing more than a design, the judges of the Circuit Court were divided in opinion, and the issue was carried to the Supreme Court of the United States. In affirming the validity of the patent, Mr. Justice Nelson, who delivered the opinion of the court, said: “The learned counsel for the defendants below insist that this second claim is only an arrangement of designs, and in a limited sense he is no doubt right; but in its connection with the first claim, and with the machine for transferring designs to pails, it is more: it is a part of the machine or instrument, and an indispensable part; it is the elastic bed of rubber or of leather, or compound of glue and molasses, of any arranged figure or design, that constitutes an element in the machine, and which, with the curved box and contrivances for working the instrument, produces the desired result. The figure or design is but incidental, and, as such, has no other protection than that which the patent secures to the inventor of the machine. The right to the use of the machine carries along with it the right to use the designs.”¹

¹ Clark v. Bousfield (1869), 10 Wall. 133. Mr. Justice Nelson further said: “In order to understand the full meaning of this second claim, it will be useful to settle the meaning of the first, as the two are intimately connected.

“The first, as we have seen, is for constructing the bed for the elastic material used in graining machines in the form shown, and for the purposes specified. The patentees describe it as a box or bed, and which may be constructed of wood or iron, or of any other suitable material. This box or bed is made for the purpose of holding the elastic material, whether of rubber or

§ 249 e. In a recent English case,¹ the complainant having taken out a patent for “certain improvements in the construction of ships, and other vessels, navigating on water,” by his specification claimed, among other things, as his invention, “first, the combination of an iron frame with an external covering of timber planking for the sides, bilges, and bottoms”; and “sixthly, the construction of iron frames for ships, or other vessels, navigating on water, adapted to an external covering of timber planking for the sides, bilges, and bottoms, as described.” On a careful consideration of the specification, the court held that the expression “iron frame,” in the first claim, was not confined to an iron frame, such as that specified in the sixth claim, “but comprehended whatever might, according to the ordinary use of language, be called ‘an iron frame’ for a ship,” and was therefore “a claim for planking with timber any iron frame of a ship.”

§ 249 f. In the case of *Arnold v. Bradbury*,² recently decided in England, the invention related to an improved ruffle-frill, or gathered fabric, and to the machinery for making the same. The patentee, after fully describing an improved ruffle or frill, and the machinery by which he proposed to make such improved ruffle, and to fasten it to a plain fabric by a single series of stitches, claimed, among other things, “the production, by machinery, of ruffles, frills, and gathered work, and the simul-

leather, or the compound of glue and molasses, which is preferred. Now, the second claim is for arranging the elastic material, when placed in this box or bed, whether curved or rectangular in form, ‘*in a series of distinct staves or designs,*’ for the purpose specified; that is, for the purpose of graining pails in the variety of colors or figures described. The elastic bed may be arranged, as is stated in the specification, so as to present one continuous or uniform design, or it may be arranged in blocks or staves, each of different designs, so that the vessel shall present the appearance of different kinds of wood, as rose-wood, oak, walnut, and others. It may also be constructed of separate pieces or blocks, as shown in the drawing, or the material may be a single united mass, impressed by different designs arranged in staves, so as to produce the same effect as when constructed in separate blocks. The two claims, as we see, are closely connected, and each essential to the complete construction of the instrument or apparatus, which, when put into practical operation by the contrivances pointed out in the specification, can accomplish the desired result, which result is the graining of the exterior body of the pail with a variety of colors and figures.”

¹ *Jordan v. Moore* (1866), L. R. 1 C. P. 624.

² (1871), Law Rep. 6 Chan. Ap. 706.

taneous attachment of the same to a plain fabric, by means of a single series of stiches, which serve both to confine and stitch the gathers, and also to secure one fabric to the other.”

It was contended, on the part of the defendants, that the above claim was bad, because there was nothing to limit the patent to any particular process, and that a proper construction of the expression “by machinery” would embrace all machinery for making ruffles and fastening them to the fabric by a series of single stitches. The claim was, therefore, too large, and consequently invalid. This construction, however, was not accepted by the court, who, interpreting the claim in the light of the preceding description, sustained the validity of the patent. In considering this point, Lord Hatherly said: “I do not think that the proper way of dealing with this question is to look first at the claims, and then see what the full description of the invention is; but rather first to read the description of the invention, in order that your mind may be prepared for what it is the inventor is about to claim. He tells you that he has now described and particularly ascertained the nature of his invention and the manner in which it is to be performed; and then, in the claim, we do not find any thing asserted or claimed as his invention beyond what is found in the previous part. And it is to be observed that he reserves to himself the right of making modifications in the machinery to produce similar results. . . . I do not deny that this case might be brought, by evidence, within the case of *Jordan v. Moore*.¹ If it were proved to be the case that this, after all, was only one of a series of inventions, and that as numbers of machines had been made anterior to this gentleman’s machine, although not precisely the same, for effecting this very object, then the court might have reason to say, “You fail, not because you are claiming too much, but because your claim takes in that which has already been invented,” just as occurred in the case with regard to iron framing for ships. But when an inventor says he is describing a new thing, and gives very full details, and says he will not exclude himself from making modifications which are substantially the same as his present invention, and then says that the object of his claim is simply to point out what he considers to be novel in what he has already stated, I think in such

¹ Law Rep. 1 C. P. 624.

a case it would be a strange perversion of the construction of the instrument to hold that he is intending to shut everybody out from any conceivable machinery which may subsequently be invented.”

§ 250. The rule which we have thus endeavored to illustrate, which requires the patentee so to describe his invention as to enable the public to know what his claim is, of course imposes upon him the duty of not misleading the public, either by concealing any thing material to the invention, or by adding any thing not necessary to be introduced. The ambiguity which we have been considering in the preceding pages may be produced involuntarily; but there is a special provision of the statute aimed at the voluntary concealment or addition of any thing material. The statute enacts it as one of the defences to an action on a patent, that the specification “does not contain the whole truth relative to his invention or discovery, or that it contains more than is necessary to produce the described effect; which concealment or addition shall fully appear to have been made for the purpose of deceiving the public.”¹ This defence will be made good, when it appears that the patentee fraudulently concealed something that he knew to be material to the practice of his invention, or fraudulently added something which he knew was not useful, material, or necessary, at the time when he prepared his specification. If it was subsequently discovered not to be useful, material, or necessary, his patent will not be affected by it.²

§ 251. II. The second rule for preparing a specification is,

To describe the invention in such a manner as to enable the public to practise it, from the specification alone.

§ 252. The statute requires the patentee to describe “the manner and process of making, constructing, using, and compounding his invention or discovery, in such full, clear, and exact terms, avoiding unnecessary prolixity, 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, and use the same; and in case of any machine, he shall fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be

¹ Act of July 4, 1836, § 15.

² See *post*, chapter on Infringement, and also chapter on Action at Law.

distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery.”

§ 253. We have seen that the question whether a specification answers this requisite of the statute, is a question of fact for the jury; and although it is not necessary that technical terms should be made use of in a specification, they often are made use of and often require to be explained by evidence. In judging of a specification, therefore, a distinction must be taken between that sort of ambiguity which a person unacquainted with technical terms would encounter, and the ambiguity which might appear to a person skilled in the particular art. It is not necessary that the specification should contain an explanation level with the capacity of every person, which would often be impossible.¹ The statute allows the patentee to address himself to persons of competent skill in the art, and it requires him to use such full, clear, and exact terms as will enable that class of persons to reproduce the thing described from the description itself. It is, therefore, important to ascertain what the rules of construction are, which define what will constitute an ambiguity or uncertainty to artists and persons skilled in the subject.

§ 254. And, *first*, with regard to the persons whose judgment and apprehension are thus appealed to: they are not those who possess the highest degree of skill or knowledge in the particular art or science to which the subject-matter belongs, nor are they day-laborers; they are practical workmen, or persons of reasonably competent skill in the particular art, science, or branch of industry. If persons of the highest skill were those whom the law has in contemplation, the object of a specification which is to enable competent persons to reproduce the thing patented, without making experiments, inventions, or additions of their own, could not generally be answered.²

§ 255. *Secondly*, as to the application of their knowledge and skill, by such persons, to the understanding and carrying out of the description given by the patentee. The description must be such as will enable persons of competent skill and knowledge to

¹ Per Story, J., in *Lowell v. Lewis*, 1 Mas. 182.

² *The King v. Arkwright*, Dav. Pat. Cas. 106; *Webs. Pat. Cas.* 64; *Lowell v. Lewis*, 1 Mas. 182; *Harmar v. Playne*, 11 East, 101. And see particularly the observations of M. Baron Parke, cited *post*, from *Neilson v. Harford*.

construct or reproduce the thing described, without invention or addition of their own, and without repeated experiments.¹ Thus, it has been held, that any material alteration to be made in existing apparatus or machinery must be stated, and not left to be supplied by the workman; as, with reference to the materials employed, or their form, or the speed of the parts, or their relative dimensions, where these are material.² So, too, the specification is insufficient, if information must be derived from experiments, or from seeing others make the thing described;³ or as it

¹ *The King v. Arkwright*, Webs. Pat. Cas. 66, 67, 69, 70. It will not do to rely for the correction of errors on the ordinary knowledge of competent workmen. In *Neilson v. Harford*, the specification contained a particular passage, which the jury found to be untrue; but they also found that any workman of competent knowledge of the subject would correct the statement. Parke, B.: "Nor do we think that the point contended for by Sir William Follett, that if a man acquainted well with the process of heating air were employed, this misstatement would not mislead him, would at all relieve the plaintiffs from the difficulty; for this would be to support the specification by a fresh invention and correction by a scientific person, and no authority can be found that in such a case a specification would be good. To be valid, we think it should be such as, if fairly followed out by a competent workman, without invention or addition, would produce the machine for which the patent is taken out, and that such machine so constructed must be one beneficial to the public." Webs. Pat. Cas. 37.

² *Ibid.* p. 67.

³ *Ibid.* p. 67, 70, 71. Upon this point, Buller, J., said: "Immison says, that from the specification he should have made a parallel cylinder, and not a spiral one, but this is the one used by the defendant. As to the rollers, it does not appear from the specification some were to go faster than others; from the specification, without other sources, it is impossible to say how they should be made, as there is no scale or plan to work by. A roller is necessary to the feeder to give regular direction to the work; it will not answer without it. From the knowledge he has now, he should add a roller if he was directed to make the machine. But that does not prove the specification to be sufficient, because, if a man, from the knowledge he has got from three trials, and seeing people immediately employed about it, is able to make use of it, it is his ideas improve the plan, and not the merit of the specification; if he makes it complete, it is his ingenuity, and not the specification of the inventor. . . . Upon the other hand, several respectable people are called, upon the part of the defendant, who say they could do it, but there is this difference in their description; most, if not every one of them, have looked at and seen how the machines were worked by the defendant, and have got their knowledge by other means, and not from the specification and plan alone; besides, they admit the manner the defendant works it is not consistent with the plan laid

has also been said, if it requires the solution of a problem.¹ And, generally, a specification, to be valid, must be such as, when fairly

down, particularly as to the cylinder, a particular part of the business, for Moore says, this upon the face of it must be taken to be a parallel, whereas that which plainly appears to be used is a spiral ; besides, after all this, they have spoken most of them in a very doubtful way, particularly Mr. Moore, who qualified his expression in the way which I have stated to you, and the others qualifying their expressions, saying they think upon the whole they could do it. Suppose it perfectly clear they could with the subsequent knowledge they had acquired, yet, if it be true that sensible men, that know something of this particular business, and mechanics in general, cannot do it, it is not so described as is sufficient to support this patent.”

¹ In *Morgan v. Seaward*, Webs. Pat. Cas. 170, 174; Alderson, B., said : “ If the invention can only be carried into effect by persons setting themselves a problem to solve, then they who solve the problem become the inventors of the method of solving it ; and he who leaves persons to carry out his invention by means of that application of their understanding, does not teach them in his specification, that which, in order to entitle him to maintain his patent, he should teach them, the way of doing the thing, but sets them a problem, which being suggested to persons of skill, they may be able to solve. That is not the way in which a specification ought to be framed. It ought to be framed so as not to call on a person to have recourse to more than those ordinary means of knowledge (not invention) which a workman of competent skill in his art and trade may be presumed to have. You may call upon him to exercise all the actual existing knowledge common to the trade, but you cannot call upon him to exercise any thing more. You have no right to call upon him to tax his ingenuity or invention. - Those are the criteria by which you ought to be governed, and you ought to decide this question according to those criteria. You are to apply those criteria to the case now under consideration, and you should apply them without prejudice, either one way or the other, for it is a fair observation to make, that both parties here stand, so far as this observation is concerned, on a footing of perfect equality. The public, on the one hand, have a right to expect and require that the specification shall be fair, honest, open, and sufficient ; and, on the other hand, the patentee should not be tripped up by captious objections, which do not go to the merits of the specification. Now, applying those criteria to the evidence in the cause, if you shall think that this invention has been so specified that any competent engineer, having the ordinary knowledge which competent engineers possess, could carry it into effect by the application of his skill, and the use of his previous knowledge, without any inventions on his part, and that he could do it in the manner described by the specification, and from the information disclosed in the specification, then the specification would be sufficient. If, on the other hand, you think that engineers of ordinary and competent skill would have to set themselves a problem to solve, and would have to solve that problem before they could do it, then the specification would be bad.” See also *Gray v. James*, 1 Pet. C. C. R. 394, 476.

followed out by a competent workman, without invention or addition, the object of the patent may be obtained.¹

¹ In *Neilson v. Harford*, Webs. Pat. Cas. 295, 313, Parke, B., instructed the jury as follows: "Now, then, understanding the meaning of this specification to be the sense I have given to it, that he claims as his invention a mode of heating the blast between the blowing apparatus and the furnace, in a vessel exposed to the fire, and kept to a red heat, or nearly (and which description I think sufficient), of the size of a cubic foot for a smith's forge, or the other size mentioned, or of any shape, these questions will arise for your decision. It is said that, understanding it in that sense, the patent is void, because there are no directions given for any mode of constructing the instrument. But understanding the patent in that sense, it seems to me, that if you should be of opinion that a person of competent skill (and I will explain to you what I mean by that) would nevertheless construct such a vessel as would be productive of some useful and beneficial purpose in the working of iron, that the patent nevertheless is good, though no particular form of vessel is given. Then it is to be recollected that this claim is a patent right, — a right of heating in any description of vessel; and in order to maintain that right, it is essential that the heating in any description of vessel, either the common form, the smith's forge, the cupola, or the blast furnace, that it should be beneficial in any shape you may choose for all those three purposes. Now, then, I think therefore that this is correctly described in the patent; and if any man of common understanding and ordinary skill and knowledge of the subject, and I should say in this case that the subject is the construction of the blowing apparatus, such a person as that is the person you would most naturally apply to in order to make an alteration of this kind, if you are of opinion, on the evidence, that such a person as that, of ordinary skill and knowledge of the subject (that is, the construction of the old blowing apparatus), would be able to construct, according to the specification alone, such an apparatus as would be an improvement, that is, would be productive practically of some beneficial result, no matter how great, provided it is sufficient to make it worth while (the expense being taken into consideration) to adapt such an apparatus to the ordinary machinery in all cases of forges, cupolas, and furnaces, where the blast is used; in that case, I think the specification sufficiently describes the invention, leaving out the other objection (to which I need not any further direct your attention) that there is not merely a defective statement in the specification, unless those conditions were complied with, but there is a wrong statement. But leaving out the wrong statement for the present, and supposing that it was not introduced, then if, in your opinion, such a person as I have described — a man of ordinary and competent skill — would erect a machine which would be beneficial in all those cases, and be worth while to erect; in that case it seems to me that this specification is good, and the patent, so far as relates to this objection, will be good. It is to be a person only of ordinary skill and ordinary knowledge. You are not to ask yourselves the question, whether persons of great skill, — a first-rate engineer, or a second-class engineer, as described by Mr.

For example, a specification which states that part of the process consists in cutting hides into thin slices, is valid, although it does not state whether the hides should be wet or dry.¹

§ 256. But slight defects in a specification will sometimes prevent the object of the patent from being obtained by any competent person who may undertake to apply it, and will therefore render the patent void, because they create a necessity for the exercise of inventive power on the part of the person who thus undertakes to apply the description. As the omitting to state the use of tallow, which the patentee employed for facilitating the manufacture of steel trusses;² or, in a patent medicine, stating the ingredients without stating the proportions.³ If any thing be omitted which gives an advantageous operation to the thing invented, it will vitiate the patent; as the omission to state the use of a material, *aquafortis*, which the patentee used himself for obtaining the effect more rapidly;⁴ for the patentee is bound to give the most advantageous mode known to him, and any circumstance conducive to the advantageous operation; otherwise he does not pay the price for his monopoly, because he does not give the public the benefit of all that he knows himself.⁵

Farey, — whether they would do it; because generally those persons are men of great science and philosophical knowledge, and they would upon a mere hint in the specification probably invent a machine which should answer the purpose extremely well; but that is not the description of persons to whom this specification may be supposed to be addressed, — it is supposed to be addressed to a practical workman, who brings the ordinary degree of knowledge and the ordinary degree of capacity to the subject; and if such a person would construct an apparatus that would answer some beneficial purpose, whatever its shape was, according to the terms of this specification, then I think that this specification is good, and the patent may be supported so far as relates to that.”

¹ Wallington v. Dale, 16 E. L. & Eq 584.

² Liardet v. Johnson, Webs. Pat. Cas. 53.

³ Ibid. 54, note.

⁴ Wood v. Zimmer, Webs. Pat. Cas. 82.

⁵ Morgan v. Seaward, Webs. Pat. Cas. 175, 182. See the remarks of Alderson, B., cited *ante*. See also The King v. Arkwright, Webs. Pat. Cas. 66; Walton v. Bateman, *ibid.* 622; Turner v. Winter, *ibid.* 81, where the employment of cheaper materials than those mentioned in the specification, or the insertion of materials which would not answer, were said to be sufficient to avoid a patent.

§ 257. So, too, if a specification directs the use of a substance, which, as generally known, contains foreign matter, the presence of which is positively injurious, and does not show any method of removing that foreign matter, or refer to any method generally known, or state how the substance in a proper state can be procured, the specification will be defective.¹

¹ *Derosne v. Farie*, Webs. Pat. Cas. 154, 162. In this very instructive case, Lord Abinger, C. B., said: "Upon the main point, however, that respecting the bituminous schistus, nothing that I have heard has removed my original impression, that there was no evidence to show that this process, carried on with bituminous schistus, combined with any iron whatsoever, would answer at all. The plaintiff himself has declared, that in that bituminous schistus, which he himself furnished, the whole of the iron was extracted; and it appears, that it was admitted by the counsel, that the presence of iron would not only be disadvantageous, but injurious. Thus, then, it appearing by the evidence, that in all the various forms in which the article exists in this country, sulphuret of iron is found, and the witnesses not describing any known process by which it can be extracted, it appears to me that the plaintiff ought to prove one of two things, — either that the sulphuret of iron in bituminous schistus is not so absolutely detrimental as to make its presence disadvantageous to the process (in which case this patent would be good). or that the process of extracting the iron from it is so simple and well known that a man may be able to accomplish it with ease. As the bituminous schistus which was procured and used was exclusively that which was furnished by the plaintiff, not in its original state, but after it had undergone distillation, and had been made into charcoal in a foreign country, and as in that stage of its preparation it could not be discovered, by examining it, whether it was made from one substance or another (the residuum, after distillation, of almost every matter, vegetable as well as animal, being a charcoal mixed more or less with other things), then there is only the plaintiff's statement to prove that the substance which was furnished by him and used was charcoal of bituminous schistus. It appeared, also, that he had declared to one of the witnesses that he had extracted all the iron from the substance so sent, and that it also underwent another process. I am, therefore, of opinion, that without considering whether or not the patent would be avoided by the process requiring the use of means to extract the iron from the bituminous schistus, which were kept secret by the patentee, he has not shown in this case, that what he has described in the patent could be used as so described, without injury to the matter going through the process. Under all these circumstances, I think that the plaintiff ought to have given some evidence to show that bituminous schistus, in the state in which it is found and known in England, could be used in this process with advantage, and as he has not done that, the defendants are entitled to a nonsuit; but, at the same time, as it is alleged that the plaintiff may supply the defect of proof as to the schistus on a new trial by other evidence, we are desirous that the patent, if a good one, should not be affected by our judgment, and think it right to direct a new trial on the terms which have been stated."

§ 258. In like manner, a specification will be defective if an article be described by a particular name, the patentee knowing that the requisite article cannot ordinarily be procured under the name by which it is described in the specification, and it be not stated where it may be procured; because the public have not that full and precise information which they have a right to require.¹ A specification will also be defective which states that the manner in which a power is to be applied varies with the circumstances in some measure, without showing in what the improvement consists, as distinguished from all former modes of doing the same thing.² If obscure terms be employed for the sake of concealment, so as to induce the belief that elaborate processes are necessary, when the simplest will succeed, the specification is bad;³ and if a patentee states that he prefers a certain material, having ascertained that no other will answer, he misleads the public.⁴

Where a general term, acids, is used, and evidence shows that some of the varieties of that class will not answer, the specification is faulty. Such term will however be understood as embracing only such acids as are generally known and used, and not obscure acids, existing only in the chemist's laboratory. The inventor should confine his specification to substances which he *knows* will answer, leaving the question of infringement by substances impliedly contained in the description or subsequently discovered as one of colorable imitation, to be passed upon by a jury.

Thus, where the patentee in his description said: "Dissolve one pound of strong alkali (for instance, American potash) in one gallon of water; this solution is to be neutralized with *acid* (sulphuric is *best* for the purpose), &c., and on the trial it was proved that a well-known acid, nitric, would not answer, the specification was held insufficient.⁵

§ 259. The rule, however, which forbids a patentee to leave the public to find out by experiment how to apply his discovery or invention, is subject to one important limitation. If, for instance, the specification of a patent for a composition of matter

¹ *Sturz v. De La Rue*, Webs. Pat. Cas. 83.

² *Sullivan v. Redfield*, Paine's C. C. R. 441, 450, 451.

³ *Savory v. Price*, Webs. Pat. Cas. 83.

⁴ *Crompton v. Ibbotson*, *ibid.* 83.

⁵ *Stevens v. Keating*, 2 Webs. Pat. Cas. 172.

is so drawn, that no one can use the invention without first ascertaining by experiment the exact proportion of the different ingredients required to produce the intended result, the patent will be void. But it has been determined by the Supreme Court of the United States, that if, in such a specification, the patentee gives a certain proportion as the general rule applicable to the ordinary state of the ingredients, he may, without the risk of having his patent declared void by the court, for vagueness and uncertainty, state other and variable proportions as exceptions to the rule, applicable to the varying states of the ingredients, although the precise proportion adapted to a given state of the ingredients, other than the usual state, can only be ascertained by computing it from the general rule, after the particular state of the ingredients is ascertained. In such cases it is for the jury to decide, on the evidence of experts, whether the general rule given is susceptible of application, and whether it furnishes the means of determining the proportions to be used, in the excepted cases, by the exercise of the ordinary knowledge and skill of the workman.¹ A specification which intentionally creates in the

¹ *Wood v. Underhill*, 5 How. S. C. R. 1, 3, 4. The specification in this case was as follows: "Be it known that I, the said James Wood, have invented a new and useful improvement in the art of manufacturing bricks and tiles. The process is as follows: take of common anthracite coal, unburnt, such quantity as will best suit the kind of clay to be made into brick or tile, and mix the same, when well pulverized, with the clay before (it) is moulded; that clay which requires the most burning will require the greatest proportion of coal dust; the exact proportion, therefore, cannot be specified, but, in general, three-fourths of a bushel of coal dust to one thousand brick will be correct. Some clay may require one-eighth more, and some not exceeding a half bushel. The benefits resulting from this composition are the saving of fuel and the more general diffusion of heat through the kiln, by which the contents are more equally burned. If the heat is raised too high, the brick will swell, and be injured in their form. If the heat is too moderate, the coal dust will be consumed before the desired effect is produced. Extremes are therefore to be avoided. I claim as my invention the using of fine anthracite coal or coal dust with clay, for the purpose of making brick and tile as aforesaid, and for that only claim letters-patent from the United States." Mr. Chief Justice Taney, delivering the judgment of the court, said: "The plaintiff claims that he has invented a new and useful improvement in the art of manufacturing bricks and tiles, and states his invention to consist in using fine anthracite coal or coal dust with clay, for the purpose of making brick or tile, and for that only he claims a patent. And the only question presented by the record is, whether his description of the relative proportions of coal

mind of one applying it any doubt as to the relative proportions of the ingredients is defective, for the public are to rely on an

dust and clay, as given in his specification, is upon the face of it too vague and uncertain to support a patent. The degree of certainty which the law requires is set forth in the act of Congress. The specification must be in such full, clear, and exact terms as to enable any one skilled in the art to which it appertains to compound and use it without making any experiments of his own. In patents for machines the sufficiency of the description must, in general, be a question of fact to be determined by the jury. And this must also be the case in compositions of matter where any of the ingredients mentioned in the specification do not always possess exactly the same properties in the same degree. But when the specification of a new composition of matter gives only the names of the substances which are to be mixed together, without stating any relative proportion, undoubtedly it would be the duty of the court to declare the patent to be void. And the same rule would prevail where it was apparent that the proportions were stated ambiguously and vaguely. For in such cases it would be evident, on the face of the specification, that no one could use the invention without first ascertaining by experiment the exact proportion of the different ingredients required to produce the result intended to be obtained. And if the specification before us was liable to either of these objections, the patent would be void, and the instruction given by the Circuit Court undoubtedly right. But we do not think this degree of vagueness and uncertainty exists. The patentee gives a certain proportion as a general rule, that is, three-fourths of a bushel of coal dust to one thousand bricks. It is true, he also states that clay which requires the most burning will require the greatest proportion of coal dust; and that some clay may require one-eighth more than the proportions given, and some not more than half a bushel instead of three-fourths. The two last-mentioned proportions may, however, be justly considered as exceptions to the rule he has stated, and as applicable to those cases only where the clay has some peculiarity and differs in quality from that ordinarily employed in making bricks. Indeed, in most compositions of matter, some small difference in the proportions must occasionally be required, since the ingredients proposed to be compounded must sometimes be in some degree superior or inferior to those most commonly used. In this case, however, the general rule is given with entire exactness in its terms; and the notice of the variations mentioned in the specification would seem to be designed to guard the brick-maker against mistakes, into which he might fall if his clay was more or less hard to burn than the kind ordinarily employed in the manufacture. It may be, indeed, that the qualities of clay generally differ so widely, that the specification of the proportions stated in this case is of no value, and that the improvement cannot be used with advantage in any case, or with any clay, without first ascertaining by experiment the proportion to be employed. If that be the case, then the invention is not patentable. Because, by the terms of the act of Congress, the inventor is not entitled to a patent. But this does not appear to be the case on the face of this specification. And whether the

honest, open, and candid exposition by the patentee of every thing that is necessary for the easy and certain procurement of that for which the patent is granted.¹

fact is so or not, is a question to be decided by a jury, upon the evidence of persons skilled in the art to which the patent appertains. The Circuit Court, therefore, erred in instructing the jury that the specification was too vague and uncertain to support the patent, and its judgment must be reversed."

¹ *Muntz v. Foster et al.*, 2 Webs. Pat. Cas. 85, 96. The patentee had worded his description thus: "I take that quality of copper known in the trade by the appellation of 'best selected copper,' and that quality of zinc known in England as 'foreign zinc,' and melt them together in the usual manner in any proportions between 50 per cent of copper to 50 per cent of zinc, and 63 per cent of copper to 37 per cent of zinc; both of which extremes, and all intermediate proportions, will roll at a red heat." Then he goes on to say: "but as too large a proportion of copper increases the difficulty of working the metal, and too large a proportion of zinc renders the metal too hard when cold, and not sufficiently liable to oxidation to effect in the best manner the intended purpose, I prefer the alloy to consist of about 60 per cent of copper to 40 per cent of zinc," &c. The court said: "There have been several questions asked of witnesses; they have had the specification put into their hands, and the usual question in these cases has been asked them, whether a competent workman, looking at this specification, could by his own skill and understanding of it produce the result which is the subject of the patent. I do not find any person who has been called, on the part of the defendants, distinctly say that he cannot make the compound here described from the specification. And, therefore, that which is generally the objection which is made would not prevail here. But there is a further objection made, pointed to one particular part of the specification, and that is, that the plaintiff has given certain limits within which he says the patent can be carried into effect. The invention may be made by different proportions, within certain limits, to which I shall now call your attention. And they (defendants) say, upon the evidence of Mr. Prosser, one of the witnesses called by the plaintiff, that the invention cannot be made in one or two of the different proportions of zinc and copper which are here specified. If such be the fact, if, upon reading this, what the witness has said has shown that the specification is not only difficult to understand, but is actually false and incorrect in that particular, there would be an end at once of the patent; because, when the plaintiff takes upon him to say that he melts copper and zinc of the qualities referred to in the usual manner, 'in any proportions between 50 per cent of copper to 50 per cent of zinc, and 63 per cent of copper to 37 per cent of zinc, both of which extremes and all intermediate proportions will roll at a red heat,' if it is found out that the two extremes would not do that which he here specifies they will do, that would be a statement of a property belonging to his discovery which it did not really possess. That would only have the effect of forcing persons to make different experiments in a way in which they must afterwards be defeated, and would, in short, be a contradiction to that object

§ 260. But although it is necessary that a specification should clearly and fully describe the invention, and should give the best process, material, and methods known to the inventor, yet it is not necessary for the patentee to describe the mode of making every thing which he uses, or detail known processes, or explain the terms appropriate to the particular art, or science, or branch

and intention of the condition, which was that all should be certain, true, and intelligible.

“Prosser underwent a long examination and stated, you know, that he made a scale in which 40 was the fixed quantity of zinc he employed, and then he varies the quantity of copper in which, when reduced to the hundredth scale in which the plaintiff has framed his specification, agrees in the limits with those terms. When he comes to the last one, I think he was asked this question, ‘I should say the experiment 40 to 50 copper with my scale, — which was 55½ to 44½ according to the plaintiff’s scale, — I would say it is of no use at all for sheathing. It is perfectly useless in more respects than one. It does not corrode enough, it is too hard, too brittle, it would roll at a red heat and at a cold heat.’ Then he goes to some others, ‘47 of zinc, 53 of copper, this would corrode less than the last mentioned, and be more brittle; 48 zinc and 52 copper still more, quite useless for sheathing. I do not think it could be put on a ship on account of its being brittle.’ What he says of all this is that it would roll at a red heat. Now the question is, whether, looking at this specification, more is meant or intended by the expression in it, when the patentee is giving these quantities, than that it shall be a metal which will roll at a red heat. This is what he (the patentee) says: ‘I melt them together in the usual manner in any proportions between 50 per cent copper to 50 per cent zinc, and 63 per cent copper to 37 per cent zinc, both of which extremes and all intermediate proportions’ — he does not say will oxidize sufficiently, or will make sheathing for a ship, but — ‘will roll at a red heat’; and then he goes on to say, as to the other quality which this is to possess, ‘but as too large a proportion of copper increases the difficulty of working the metal, and too large a proportion of zinc renders the metal too hard when cold, and not sufficiently liable to oxidation to effect in the best manner the intended purpose, I prefer the alloy to consist of about 60 per cent of copper to 40 per cent of zinc.’

“Therefore, understanding the specification in that way, the question (the only question of fact that you can determine upon this) is, whether this account, which his own witness has given of it, has falsified the statement in the specification. If that statement had been distinctly that the lower mixture of the lower compound, the extreme, would have been sufficient for the sheathing of ships, both in respect of oxidation and of rolling hot, I should have thought the specification bad and avoided the patent. But you must say for yourselves whether you are satisfied that all that was described here was, that it would roll at a red heat and at the intermediate states; whether, in point of fact, it would roll at a red heat.”

of industry to which his invention belongs.¹ The specification is, as we have seen, addressed to persons acquainted with the nature of the business; some technical knowledge is presumed on the part of those who will undertake, after the patent is expired, to carry out the invention; and such persons are to be called as witnesses to explain the language to the jury, while the patent is in force, and to show that it is capable of being understood by those to whom it is addressed. Accordingly it has been said, that a specification containing scientific terms, which are not understood, except by persons acquainted with the nature of the business, is not bad because an ordinary person does not understand it, provided a scientific person does; but a specification using common language, and stating that by which a common man may be misled, though a scientific man would not, when it does not profess to use scientific terms, and an ordinary man is misled by it, would not be good.² And it has been held that if a specification contain an untrue statement in a material circumstance, of such a nature that, if literally acted upon by a competent workman, it would mislead him, and cause the experiment to fail, the specification is therefore bad, and the patent invalidated, although the jury, on the trial of an action for the infringement of the patent, find that a competent workman, acquainted with the subject, would not be misled by the error, but would correct it in practice.³ This rule, however, must not, we apprehend, be applied too rigorously. Where the specification contains the description of a long and complicated process, consisting of several operations following one another in regular order, and the description as a whole is clear and sufficient, the court will not pronounce it invalid because of a slight obscurity of language in describing one of the operations, especially where such obscurity is rather grammatical than real, and would not seriously mislead a competent workman.⁴

¹ Per Lord Abinger, C. B., in *Neilson v. Harford*, Webs. Pat. Cas. 341. See also *Derosne v. Fairie*, *ibid.* 154, 167.

² *Ibid.*

³ *Neilson v. Harford*, 8 M. & W. 806; s. c. Webs. Pat. Cas. 328.

⁴ *Beard v. Egerton*, 8 Mann., Gr. & Scott, 165, overruling s. c. 2 Carr. & Kirw. 667. "Applying the same principle of construction to the specification before us, we think it is free from any such mistake or obscurity as would mislead a person of fair intelligence. The specification states that the

§ 261. The specification need not describe that which is within the ordinary knowledge of any workman who would be employed

process is divided into five operations. 'The first consists in polishing and cleaning the silver surface of the plate, in order to properly prepare or qualify it for receiving the sensitive layer or coating upon which the action of the light traces the design. The second operation is the applying that sensitive layer or coating to the surface. The third, in submitting in the camera obscura the prepared surface or plate to the action of the light, so that it may receive the images. The fourth, in bringing out or making appear the image, picture, or representation which is not visible when the plate is first taken out of the camera obscura. The fifth and last operation is that of removing the sensitive layer,' &c. It then gives a description of the first operation, — preparing the silver surface of the plate; the concluding part of which directs that nitric acid dissolved in water is to be applied three different times, care being taken to sprinkle, each time, the plate with powder, and rub it dry and very lightly with clean cotton; and this concludes the description of the first operation, viz., the preparing the silver surface of the plate, when it is intended for immediate use; and to this part of the specification no objection was or could be made. But then some further information is given in respect to the preparation of the plate, in these words: 'When the plate is not intended for immediate use or operation, the acid may be used only twice upon its surface, after being exposed to heat. The first part of the operation, that is, the preparation as far as the second application of the acid, may be done at any time; this will allow of a number of plates being kept prepared up to the last slight operation. It is, however, considered indispensable, that just before the moment of *using the plates in the camera*, or the reproducing the design, to put at least once more some acid on the plate, and to rub it lightly with pounce, as before stated; finally, the plate must be cleaned with cotton from all pounce-dust which may be on the surface or its edges.' Upon this part of the specification it was contended that the direction to apply acid just before the moment of using plates in the camera (which is the third operation) was a direction to use it after the second operation, viz., the coating the plate with iodine; and that using the acid at that period would entirely spoil the whole process. But it must be remembered that the passage in question is part of the direction given for performing the first operation, viz., preparing the plate to receive the iodine. It is to be observed when the plate is not intended to be used immediately, and where it has previously been *partially* but not *entirely* prepared for the iodine, this last application of acid is still to *precede the second operation*. The whole passage may be considered as in a parenthesis, and the expression 'just before the moment of using the plate in the camera' is put in opposition to the time of partially preparing the plate; after which it is supposed to have been laid by for future use. That this is the real meaning of the passage is further manifested by what follows in a subsequent part of the printed specification: 'After this second operation, viz., application of the iodine, the plate is to be passed to the third operation, or that of the *camera obscura*. Wherever it is possible, the one operation should immedi-

to put up the apparatus; as, a condenser in constructing a gas apparatus.¹ So, too, a deviation from the precise dimensions shown by the specification and model, so as to make different parts work together, is within the knowledge of any workman.² But if the practical application of the invention involves a particular kind of knowledge on the part of a workman, requiring him to do that which a person of ordinary engineering skill ought to know how to do, it must at least suggest to him that that thing is to be done, if it does not specifically point out the mode of doing it.³ In like manner it is not necessary, in the descrip-

ately follow the other.' It is plain, therefore, that the patentee did not intend any separate operation to intervene between the application of iodine and the introduction of the plate into the camera obscura. The last application of acid, therefore, must have been intended to precede the second operation.

"This, we think, is the fair construction of the language of the specification. And although there may be at first sight some appearance of obscurity in it, we think that it is cleared away by a consideration of the whole, and that it is sufficiently plain to be understood by an operator of fair intelligence." Wilde, C. J.

¹ Crossley v. Beverley, Webs. Pat. Cas. 110, note.

² Morgan v. Seaward, Webs. Pat. Cas. 176. In this case, Alderson, B., said to the jury: "In the case of the steam engine, there was put in, on the part of the defendants, a model made, as it was said, according to the specification, which model would not work. The model was a copy of the drawing and would not work, because one part happened to be a little too small, whereas if it had been a little larger, it would have worked. Now, a workman of ordinary skill, when told to put two things together, so that they should move, would, of course, by the ordinary knowledge and skill he possesses, make them of sufficient size to move. There he would have to bring to his assistance his knowledge that the size of the parts is material to the working of the machine. That is within the ordinary knowledge of every workman. He says: 'I see this will not work, because it is too small,' and then he makes it a little larger, and finds it will work; what is required is, that the specification should be such as to enable a workman of ordinary skill to make the machine; with respect to that, therefore, I do not apprehend you will feel much difficulty."

³ In the case last cited, the same learned judge further instructed the jury as follows: "Mr. George Cottam says: 'It is a common problem to find a centre from three given points, and a person of ordinary engineering skill ought to be able to do that.' The question is, whether it ought not to be suggested to him by the specification, that that is the problem to be solved. Then Mr. Curtis says: 'I have made wheels on this plan.' You see he made the two wheels which were sent to the Venice and Trieste Company, but those were made under the direction of Mr. Galloway, the inventor. Now, it some-

tion of a machine, to state of what material every part should be made, where the principle of operation and the effect are the same, whether the parts be made of one material or another;¹ but if a particular material be essential to the successful operation of the machine, as the patentee uses it, he must direct the use of that material.

Thus, where the invention was the formation of grinding chambers by the combination of movable conical rings with stationary cylinders, and the particular description in the specification showed a mill with three grinding chambers, but the claim was to the combination of stationary *cylinders* with *one or more* movable conical rings, so that both cylinders and rings might be multiplied to any extent, or the mill limited to two cylinders and one ring, it was ruled by the court that the description was sufficient to enable a mechanic of ordinary skill to make a mill with more chambers than three.²

§ 261 *a*. In *Tyler v. Boston*, the patent was for a new burning fluid, compounded of fusel oil with the mineral and earthy oils. The patentee claimed "the compound produced by the combination of the mineral or earthy oils with fusel oil, in the manner and for the purpose substantially as herein set forth; said compound constituting a new manufacture." The component parts of this new manufacture were described as, "by measure, crude fusel oil one part, kerosene one part." This combination, the patent stated, might be varied by the substitution of naphtha, or crude petroleum, in place of kerosene, or a part of the kerosene by an *equal* quantity of naphtha or crude petroleum; the

what detracts from the weight due to his testimony, not as to respectability, but as to the value of his evidence to you, that he had received the verbal instructions of Mr. Galloway. It may be, that he could do it because of his practice under Mr. Galloway; and it must be recollected that people in other places would not have that advantage. He says, he would not have any difficulty in doing it; and he says: 'I should not consider my foreman a competent workman unless he were able to make the wheel from the specification and drawings.' He says: 'I could alter the angle by altering the cranks.' The question is not, whether he could do that, but whether he could alter the angle to a particular angle by altering the cranks in a particular way, that is, whether, having the angle given to him, he could make the alteration that was desired."

¹ *Brooks v. Bicknell*, 3 McLean's R. 250, 261.

² *Wilbur v. Beccher*, 2 Blatchf. 132.

exact quantity of fusel oil which is necessary, to produce the most desirable compound, must be determined by experiment.”

The defendants used a burning fluid, composed of naphtha seventy-two and fusel oil twenty-eight parts; and expert chemists proved that seventy-two parts *in bulk* of naphtha was the *substantial equivalent* of twenty-eight parts of kerosene. The court below charged the jury, “that the patentee, in suggesting that naphtha might be substituted for kerosene, intended to describe the same proportion in the combination,” and “that the jury should understand the construction of the suggested substitution, to wit, naphtha for kerosene, as contemplating the same proportion of the two ingredients, that is, one and one, or fifty per cent of one, and fifty per cent of the other; and, further, that “whether one compound of given proportions is substantially the same as another compound varying in the proportions — whether they are substantially the same or substantially different — is a question of fact, and for the jury.” Under this charge the jury found for the defendant, and the ruling was affirmed by the Supreme Court of the United States. “While the specification of the patent,” said Mr. Justice Grier, “suggests the substitution of naphtha for crude petroleum, it prescribes no other proportion than that of equal parts by measure. The explanation, that the kerosene must be replaced by an *equal quantity* of naphtha, does not alter the case.”¹

§ 261 b. Where the invention consisted of an improved process in annealing car wheels, the description directed that “the temperature of the furnace or chamber, and its contents, be gradually raised to a point a little below that at which fusion commences,” and these words were substantially repeated in the claim. The court held, that the inventor, in referring to a degree of heat a little below the point of fusion, indicated the degree which, in the hands of an operator of skill and judgment, would effect practically and successfully the object of his invention. “He avoids the point of incipient or actual fusion, but requires the heat to be a *little* below that point. This expression clearly imports some latitude of discretion in the operator. It clearly does not require that the temperature of the wheels shall be raised to the precise point above which fusion would commence. It

¹ Tyler v. Boston (1868), 7 Wall. 327.

must be presumed that the inventor knew, that if wheels were heated to incipient infusion, or to the degree immediately below, they would be so soft as not to retain their shape or symmetry, in their position in the chamber or furnace, and that thus their utility would be destroyed. "It is not supposable that the inventor intended what would destroy the very object he had in view, namely, to make a wheel in which the drill of the periphery should be preserved, and the inherent strain, from unequal contraction, avoided. I am clear that the patent may be regarded as claiming, by the fair import of the words, 'a little below the point of fusion,' such a degree of heat as is necessary to effectuate the intention of the inventor. His object was to guard against the point of fusion, and also against a temperature so low that an inherent strain would be produced between the thin and the thick parts of the wheel. He says expressly, 'they must not be allowed to cool, after removal from the mould, to a degree which will cause this strain.'"¹

And so, where the invention consisted in a process for manufacturing free fat acids and glycerine from fatty bodies or substances, by the action of water at a high temperature and pressure, the "melting point of lead" was given as the proper degree of heat to be used in the operation, and it was added that "the change of fatty matter into fat acid and glycerine takes place with some materials (such as palm oil), at or below the melting point of bismuth." This was regarded by the court as a precise degree of heat, it being well known that lead melts at 612° Fahrenheit and bismuth at about 510°.

The specification further stated that "the heat has been carried considerably above the melting point of lead, without any apparent injury, and the decomposing action of water becomes more powerful as the heat is increased." The fact that the degree of heat might be thus varied without injury did not render the specification liable to objection, for want of certainty and clearness. In the language of the court, "There is a fixed rule given, which may be safely followed, while it is made known that the manufacturer may safely depart, to some extent, from this rule, if, from experiment and a just exercise of discretion, it should be expedient to do so."¹

¹ Leavitt, J., *Whitney v. Mowry* (1867), 3 Fisher's Pat. Cas. 157.

² *Tilghman v. Werk* (1862), 2 Fisher's Pat. Cas. 229.

§ 261 c. Where the invention consisted in producing hard rubber by “thoroughly mixing India rubber, or other vulcanizable gum, with sulphur, whether with or without auxiliary ingredients, in the proportion of about four ounces to a pound of sulphur, to a pound of the gum, and then subjecting the same to a high degree of artificial heat, as in the vulcanizing process of Charles Goodyear, until the compound shall have acquired the required hard and tough property,” &c., the range of heat given being not less than 260° or 275° Fahrenheit, it was held that the descriptions in the patents, both as respects the proportion of sulphur and rubber, and as to the degree of heat, necessary to produce the new substance, was sufficiently full and certain within the requirements of the patent law.”¹ “The proportions of the mixture,” said Mr. Justice Nelson, in *Goodyear v. Wait*, “is about from four ounces to a pound of sulphur, to a pound of rubber, which we understand as meaning any proportion of sulphur between four ounces and a pound to a pound of rubber, properly mixed and subjected to the required heat, will produce the substance. What uncertainty is there in this, or necessity of experimenting, on the part of a person of ordinary skill in the art, to make the compound? The inventive faculty is exhausted in the directions given to make the article. All the work that remains to be done is that by the hand of the skilful workman. We agree, if it could be shown that the mixture, as described, when properly reduced to practice, failed to produce the article, the patent could not be upheld. But that is a different question from the one here presented, namely, whether the description is sufficiently clear and certain.”

§ 262. In the case of machinery, the statute directs the patentee to accompany his specification with “a drawing or drawings, and written references, where the nature of the case admits of drawings.” The object of annexing drawings is both to distinguish the thing patented from other things known before, and to explain the mode of constructing the subject of the patent. It has been settled, that the drawings constitute a part of the specification, when annexed thereto, and may be used to explain or help out the otherwise imperfect description in the specification. So that it is not necessary that the description should be wholly

¹ *Goodyear v. Wait* (1867), 3 Fisher's Pat. Cas. 242 ; *Goodyear v. N. Y. Gutta Percha Co.* (1862), 2 Fisher's Pat. Cas. 312.

in writing, but it may be partly in writing and partly in drawing; and if, by a comparison of the words and the drawings, the one will explain the other sufficiently to enable a skilful mechanic to perform the work, and to show what is the invention claimed, the specification will be sufficient.¹ And it has been held, that in order to make a drawing, when annexed to or accompanying a specification, part of the specification, so that the written description may be read by it, it is not necessary that the written description should contain references to the drawing; that the direction in the statute, to annex “drawings and written references,” means that where references from the writing to the drawing are necessary to the understanding of the machine or improvement, they are to be made; but that the description of many machines or improvements, when accompanied by a drawing, may be perfectly understood without references in the description itself.²

The entire specification and drawings are to be examined together, and an error in one place to be corrected by the aid of the residue.³ The drawings need not be mentioned in the specification, but it is sufficient if the patentee puts them and written references on file with the specification.⁴

A drawing filed some time after the recording anew of a patent, under section one, act March, 1837, is admissible in evidence, but is not to be deemed and taken as part of the specification, nor to be used for correcting any material defect therein.⁵

§ 263. It was formerly held in England that the drawings annexed to specifications ought to be drawn on a scale; so that the relation and proportion of the parts to each other, and the dimensions of the different parts, might appear in due ratio to each other.⁶ But this rule has been modified; and it seems now to be considered that if a mechanic can make the subject of the patent from the drawing in perspective, it is not necessary that

¹ *Earle v. Sawyer*, 4 Mas. 1, 9; *Bloxam v. Elsee*, 1 Car. & P. 558; *Brunton v. Hawkes*, 4 B. & Ald. 540; *Swift v. Whisen*, 3 Fisher's Pat. Cas. 343.

² *Brooks v. Bicknell*, 3 McLean's R. 250, 261; *Washburn v. Gould*, 3 Story's R. 122, 133.

³ *Hogg et al. v. Emerson*, 11 How. 587; affirming and explaining, 6 How. 437; *Kittle v. Merriam*, 2 Curtis, C. C. 475.

⁴ *Emmerson v. Hogg*, 2 Blatchf. 1.

⁵ *Winans v. Schenectady & Troy R.R.*, 2 Blatchf. 279.

⁶ *The King v. Arkwright*, Dav. Pat. Cas. 114.

there should be a scale.¹ Indeed, it is a necessary consequence of the rule which makes the written description open to explanation by the drawing, to hold that the drawing is open to explanation by the written description. So long as both together enable the public to know and practise the invention, it must be immaterial whether the drawing is made upon a scale or not. But if the subject of the patent could not be made without many experiments, unless the drawing is upon a scale, then undoubtedly the whole specification taken together, being the written description and the drawing, would be defective.

§ 264. It should not be forgotten, that the statute requires a formal attestation of the specification and drawings. They must be signed by the inventor and by two witnesses.² It has been suggested, that the signing of the specification referring to the drawings is in effect attesting the drawings.³ But whether the statute is to be so construed as to require both the specification and the drawings to be signed has not been decided.

§ 264 *a.* The act of 1870 provides that the "specification and claim shall be signed by the inventor, and attested by two witnesses"; and the following section requires that a copy of the drawings "shall be attached to the patent, as part of the specification."

§ 265. Provision was made by the thirteenth section of the act of 1836 for the amendment of the specification by the addition of new improvements made after the patent has issued. The description of any such new improvement may be filed in the Patent Office, and is directed to be annexed by the commissioner to the original specification, with a certificate of the time of its being so annexed; and thereafter it is to have the same effect as if it had been embraced in the original specification. This provision was, however, repealed by the act of 1861, c. 88, § 9, which enacted: "and that so much of the 13th section of the act of Congress, approved July 4, 1836, as authorizes the annexing to letters-patent of the description and specification of additional improvements, is hereby repealed, and in all cases where additional improvements would now be admissible, independent

¹ Godson on Patents, p. 137.

² Act of July 4, 1836, § 6, "which description and drawings, signed by the inventor and attested by two witnesses, shall be filed in the Patent Office."

³ Phillips on Patents, p. 302, 303.

patents must be applied for." (See chapter on Proceedings at Patent Office.) Improvements made and entered before the passage of this repealing clause are not, of course, affected by it, but are still valid under the act of 1836.

§ 266. A still further provision is made for the amendment of a redundant specification, by the filing of a *disclaimer*. The act of 1837, c. 45, § 7, provided that, "whenever any patentee shall have, through inadvertence, accident, or mistake, made his specification of claim too broad, claiming more than that of which he was the original or first inventor, some material and substantial part of the thing patented being truly and justly his own, any such patentee, his administrators, executors, and assigns, whether of the whole or of a sectional interest therein, may make disclaimer of such parts of the thing patented as the disclaimant shall not claim to hold by virtue of the patent or assignment, stating therein the extent of his interest in such patent, which disclaimer shall be in writing, attested by one or more witnesses, and recorded in the Patent Office, on payment by the person disclaiming, in manner as other patent duties are required by law to be paid, of the sum of ten dollars. And such disclaimer shall thereafter be taken and considered as part of the original specification, to the extent of the interest which shall be possessed in the patent or right secured thereby, by the disclaimant, and by those claiming by or under him subsequent to the record thereof. But no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing the same."

§ 267. The ninth section of the same act provided as follows: ("Any thing in the fifteenth section of the act to which this is additional to the contrary notwithstanding) that, whenever by mistake, accident, or inadvertence, and without any wilful default or intent to defraud or mislead the public, any patentee shall have in his specification claimed to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for so much of the invention or discovery as shall be truly and *bona fide* his own: *Provided*, it shall be a material and substantial part of the thing patented, and be definitely distinguishable from the other

parts so claimed without right as aforesaid. And every such patentee, his executors, administrators, and assigns, whether of a whole or a sectional interest therein, shall be entitled to maintain a suit at law or in equity on such patent for any infringement of such part of the invention or discovery as shall be *bona fide* his own as aforesaid, notwithstanding the specification may embrace more than he shall have any legal right to claim. But, in every such case in which a judgment or verdict shall be rendered for the plaintiff, he shall not be entitled to recover costs against the defendant, unless he shall have entered at the Patent Office, prior to the commencement of the suit, a disclaimer of all that part of the thing patented which was so claimed without right: *Provided, however,* that no person bringing any such suit shall be entitled to the benefit of the provisions contained in this section, who shall have unreasonably neglected or delayed to enter at the Patent Office a disclaimer as aforesaid."

This subject is now regulated by the statute of 1870. The fifty-fourth section of that act provides: "That whenever, through inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, a patentee has claimed more than that of which he was the original or first inventor or discoverer, his patent shall be valid for all that part which is truly and justly his own, provided the same is a material or substantial part of the thing patented; and any such patentee, his heirs or assigns, whether of the whole or any sectional interest therein, may, on payment of the duty required by law, make disclaimer of such parts of the thing patented as he shall not choose to claim or to hold by virtue of the patent or assignment, stating therein the extent of his interest in such patent; said disclaimer shall be in writing, attested by one or more witnesses, and recorded in the Patent Office, and it shall thereafter be considered as part of the original specification to the extent of the interest possessed by the claimant and by those claiming under him after the record thereof. But no such disclaimer shall effect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing it."

The following cases, although occurring under the provisions of the English statute of Disclaimer (5 & 6 Will. IV. c. 83), may be cited as illustrative of the general principles applicable to this topic.

Thus, in *Seed v. Higgins*,¹ the patentee, in his specification, states his invention to consist in the application of the principle of centrifugal force in the fliers employed in the above-mentioned machinery, for the purpose of producing the required elasticity or pressure upon the bobbin, by causing the small spur or lever which conducts the sliver of cotton or other fibrous material on to the bobbin, to press or bear against the same simply by the action of such force, — and adds, that he has attached a drawing to the specification, minutely describing by reference to such drawing a machine, — and then continues: “I do not confine myself to this particular method, but claim as my invention the application of the law or principle of centrifugal force to the particular purpose set forth, i. e. to fliers used in machinery or apparatus for preparing, slubbing, and roving cotton for the purpose of producing a hard and evenly compressed bobbin.”

Afterwards, he entered a disclaimer, declaring, “For the reason aforesaid, I do hereby disclaim all application of the law or principle of centrifugal force as being part of my invention or comprised in my claim, except only the application of centrifugal force by means of a weight acting upon a presser, so as to cause it to press against the bobbin, as described in said specification.”

It was held by the Court of Queen’s Bench, and affirmed by the Exchequer Chamber, that this disclaimer was valid, and that, the original specification being read in connection with it, the result was a claim for only the machine particularly described.

In *Tetley v. Easton*,² it was held by Creswell, J., that the effect of a disclaimer was merely to strike out from the specification those parts of the machinery which are disclaimed, and that it cannot be read as explanatory of what remains.

In *Ralston v. Smith*,³ the invention of “improvements in embossing and finishing woven fabrics, and in the machinery or apparatus employed therein,” as described in the specification, consisted in the use of rollers having “any design grooved, fluted, engraved, milled, or otherwise indented upon them.” A disclaimer was afterwards entered, by the statements wherein it appeared that the desired effect could *only* be produced by the use of a certain

¹ 8 Ell. & Blackb. 755, 771.

² *Tetley v. Easton*, 2 Com. Ben. n. s. 706.

³ *Ralston v. Smith*, 11 Com. Ben. n. s. 471, affirming 9 Com. Ben. n. s. 117.

species of roller not particularly described in the specification, namely, a roller having circular grooves round its surface. All other rollers were expressly disclaimed. The Exchequer Chamber, affirming the judgment of the Court of Common Pleas, held that such a disclaimer was merely an attempt to turn a specification for an impracticable generality into a claim for a specific process, which was in one sense comprised under the generality, but which could not be discovered there without going through the same course of experiment as that which led to the discovery of the specific process mentioned in the disclaimer. Consequently the disclaimer was void as an attempt to extend the patent.

By the statute 16 & 17 Vict. c. 115, an inventor is allowed to make a provisional specification, pending the proceedings for obtaining letters-patent. In *Mackelcan v. Rennie*,¹ it was held that such provisional specification is not to be admitted in explanation or enlargement of the complete specification.

§ 268. The disclaimer mentioned in the seventh section has been held to apply solely to suits pending when the disclaimer was filed in the Patent Office; and that mentioned in the ninth section, to suits brought after the disclaimer is so filed.²

¹ 13 C. B. N. S. 50.

² *Wyeth v. Stone*, 1 Story's R. 273, 293. In this case, Mr. Justice Story thus expounded the statute: "We come, then, to the remaining point, whether, although under the Patent Act of 1793, ch. 55, the patent is absolutely void, because the claim includes an abstract principle, and is broader than the invention; or, whether that objection is cured by the disclaimer made by the patentee (*Wyeth*), under the act of 1837, c. 45. The seventh section of that act provides, 'That whenever any patentee shall have, through inadvertence, accident, or mistake, made his specification too broad, claiming more than that of which he was the original or first inventor, some material and substantial part of the thing patented being truly or justly his own, any such patentee, his administrators, executors, or assigns, whether of the whole or a sectional part thereof, may make disclaimer of such parts of the thing patented as the disclaimant shall not claim to hold by virtue of the patent or assignment, &c. And such disclaimer shall be thereafter taken and considered as a part of the original specification, to the extent of the interest which shall be possessed in the patent or right secured thereby by the disclaimant,' &c. Then follows a proviso, that 'no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing the same.' The ninth section provides, 'That whenever, by mistake, accident, or inadvertence, and without any wilful default or intent to defraud or mislead the public, any patentee shall have, in his specification, claimed to be the first and original inventor or discoverer of any mate-

The disclaimer, however, mentioned in section nine, which provides that the suit shall not be defeated where the patentee claims

rial or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for so much of the invention or discovery, as shall be truly and *bonâ fide his own*; provided it shall be a material and substantial part of the thing patented, and shall be definitely distinguishable from the other parts so claimed without right as aforesaid.' Then follows a clause, that in every such case, if the plaintiff recovers in any suit, he shall not be entitled to costs, 'unless he shall have entered at the Patent Office, prior to the commencement of the suit, a disclaimer of all that part of the thing patented, which was so claimed without right'; with a proviso, 'That no person bringing any such suit shall be entitled to the benefits of the provisions contained in this section, who shall have unreasonably neglected or delayed to enter at the Patent Office a disclaimer as aforesaid.'

"Now, it seems to me, that upon the true construction of this statute, the disclaimer mentioned in the seventh section must be interpreted to apply solely to suits pending when the disclaimer is filed in the Patent Office; and the disclaimer mentioned in the ninth section to apply solely to suits brought after the disclaimer is so filed. In this way the provisions harmonize with each other; upon any other construction they would seem, to some extent, to clash with each other, so far as the legal effect and operation of the disclaimer is concerned.

"In the present case, the suit was brought on the 1st of January, 1810, and the disclaimer was not filed until the 24th of October, of the same year. The proviso, then, of the seventh section would seem to prevent the disclaimer from affecting the present suit in any manner whatsoever. The disclaimer, for another reason, is also utterly without effect in the present case; for it is not a joint disclaimer by the patentee and his assignee, Tudor, who are both plaintiffs in this suit, but by Wyeth alone. The disclaimer cannot, therefore, operate in favor of Tudor, without his having joined in it, in any suit, either at law or in equity. The case, then, must stand upon the other clauses of the ninth section, independent of the disclaimer.

"This leads me to say, that I cannot but consider that the claim made in the patent for the abstract principle or art of cutting ice by means of an apparatus worked by any other power than human, is a claim founded in inadvertence and mistake of the law, and, without any wilful default or intent to defraud or mislead the public, within the proviso of the ninth section. That section, it appears to me, was intended to cover inadvertences and mistakes of the law, as well as inadvertences and mistakes of fact; and, therefore, without any disclaimer, the plaintiffs might avail themselves of this part of the section to the extent of maintaining the present suit for the other parts of the invention claimed, that is, for the saw and for the cutter, and thereby protect themselves against any violation of their rights, unless there has been an unreasonable neglect or delay to file the disclaimer in the office. Still, however, it does not seem to me, that a court of equity ought to interfere to grant a perpetual

more than he has invented, applies only to cases where the part invented can be clearly distinguished from that claimed but not invented.¹

§ 269. In this section it is intended to give a condensed statement of the constructions given by the courts to the specifications of some of the leading patents litigated in this country and in England.

The distinction between an improvement in a machine and a novel result attained by a mere alteration in an old machine is abundantly illustrated by the course of decision upon Kay's patent, in the case of *Kay v. Marshall*.² The patentee, after describing his improved machinery for *macerating* flax, goes on to describe his *improved machinery for spinning* such macerated flax: "I place the drawing rollers only two and a half inches from the retaining rollers, and this constitutes the *principal improvement in said spinning machinery*; . . . and that which I claim as my invention in respect of improved machinery, is (the wooden or other trough marked D, for holding the rovings when taken from the macerating vessels, and) the placing of the retaining rollers and the drawing rollers nearer to each other than they have ever before been placed, say within two and a half inches of each other, for the purpose aforesaid." After an extensive course of litigation before the Vice Chancellor, Baron Parke, on trial of a feigned issue, and the Court of Common Pleas on issue of law, the case was finally decided by the House of Lords. It was there held, Lord Cottenham rendering the decision, that the processes of maceration and of spinning were entirely distinct, and conse-

injunction in a case of this sort, whatever might be the right and remedy at law, unless a disclaimer has been in fact filed at the Patent Office before the suit is brought. The granting of such an injunction is a matter resting in the sound discretion of the court; and if the court should grant a perpetual injunction before any disclaimer is filed, it may be, that the patentee may never afterwards, within a reasonable time, file any disclaimer, although the act certainly contemplates the neglect or delay to do so to be a good defence, both at law and in equity, in every suit brought upon the patent, to secure the rights granted thereby. However, it is not indispensable in this case to dispose of this point, or of the question of unreasonable neglect or delay, as there is another objection, which in my judgment is fatal, in every view, to the maintenance of the suit in its present form."

¹ *Vance v. Campbell*, 1 Black. 427; *vide Peterson v. Wooden*, 3 M'Lean, 248.

² *Kay v. M.*, 2 W. P. C. 34.

quently that the patent was for two inventions, and not for one alone; also that the patentee's claim must be construed as one for a machine, and not for a process or a result; that as the jury, on the feigned issue, had found that parties other than the patentee had previously placed the rollers at varying distances apart, therefore the patentee's claim was void for want of novelty.¹

In McCormick's patent of October 23, 1847, for improvements in reaping-machines, the patentee says: "I also claim, as my invention, the arrangement of the *seat* of the raker over the end of the finger-piece which projects beyond the range of fingers, and just back of the driving-wheel, *as described*, in combination with and placed at the end of the reel." This was construed not to be a claim for the seat, as *a seat*, or for its peculiar mode and form of construction, but a claim for the arrangement and combination of machinery described, by which the benefit of a seat or position

¹ "The *invention* was not of macerating flax or of machinery, but of treating flax in a certain manner, i. e. spinning macerated flax at a short ratch; the doing that was a new manufacture of flax; the result, as evidence by the effects on trade, was of national importance. Such was Kay's invention in fact.

"Kay's patent, i. e. title (claim), was for 'new and improved machinery for preparing and spinning flax,' &c. The spinning machine thus described was old; upon this ground, therefore, the patent was invalid, and in this ground of invalidity all the judgments concur.

"The judgments also concur in this, that the fixing at a given distance, as two and a half inches, the rollers of spinning machinery adapted to work at greater or less distances, is not *per se* any manufacture, or the subject of letters-patent.

"But the judgment of the Court of Common Pleas has been supposed to go further, and has applied to sustain propositions to the following effect: first, that the use of such old machinery for the special purpose of spinning macerated flax could not be the subject of a valid patent; secondly, if a specification contains a claim to any matter which is not *per se* the subject of letters-patent, though in fact new, and there being no false suggestion, i. e. the title being supported by other matters contained in the specification, that such letters-patent are invalid. The following paragraph in the judgment of the House of Lords, 'If he has discovered any means of using the machine which the world had not known before the benefit of, that he has a right to secure to himself by means of a patent' (p. 82), is an authority against the former proposition, and an authority to show that the spinning of macerated flax by known machinery would have been the subject-matter of letters-patent, if the title and specification had properly been adapted thereto. . . . The flax so spun would be a new manufacture, both in respect of the method and result." Note by Mr. Webster, p. 84.

for the raker on the machine is obtained.¹ In a subsequent action arising under the same patent,² it was held that claims No. 2 and No. 3 of the specification, “(2) I claim the reversed angle of the teeth of the blade, in manner described; (3) I claim the arrangement and construction of the fingers or teeth for supporting the grain so as to form the angular places in front of the blade, as and for the purpose described,” were not to be read in connection with each other, but separately.

Goodyear, in describing the nature of his invention,³ says in his specification: “The nature of the first part of my invention consists in curing caoutchouc or india-rubber, when combined with or in the presence of sulphur, by submitting the same to the action of a high degree of artificial heat, at a temperature say from 212 to 350 or thereabouts. . . . And the second part of my invention consists in preparing and curing the triple compound of caoutchouc, or india-rubber, sulphur, and a carbonate or other salt or oxide of lead, for the purpose above described.” He then proceeds to describe the process and relative proportions of the ingredients; and after stating the leading features of his invention to be the effects produced by heat on the rubber thus combined, he concludes: “What I claim as my invention and desire to secure by letters-patent is the curing of caoutchouc, or india-rubber, by submitting it to the action of a high degree of artificial heat, substantially as herein described and for the purposes specified. And I also claim the preparing and curing the compound of india-rubber, sulphur, and a carbonate or other salt or oxide of lead, by subjecting the same to the action of artificial heat, substantially as herein described.”

In the construction of this specification, it was held that the patentee had claimed not merely the process of preparing vulcanized india-rubber, but the product itself, as a new manufacture or composition of matter. Mr. Justice Grier in this case observed: “On account of the vagueness and indefiniteness of the language used in describing the various arts, machines, manufactures, and compositions of matter, it is impossible to

¹ *McCormick v. Seymour*, 2 Blatchf. 240. Affirmed (except as to rule of damages) in *Seymour v. McCormick*, 16 How. 480.

² *Seymour v. McCormick*, 19 How. 96. See also an English case under the same patent in 4 *Law Times*, N. S. 832.

³ *Goodyear v. The R.R.*, 2 Wallace, C. C. 356.

describe the real nature of many discoveries or processes in language absolutely free from all ambiguity and all misconstruction. Different persons, looking at it from different points of view, would describe it in different terms. In the present case, one might describe it as 'the art of curing india-rubber'; another, as 'a new and useful improvement in the process of curing india-rubber'; another, as 'the art of rendering caoutchouc and manufactures in which it is used insensible to heat or cold, or the action of most of its known solvents'; another, as 'a fabric, manufacture, or new composition of matter, having qualities never before combined in any other known substance, being elastic, water-proof, insensible to acids, to heat, or to cold.' Still, call it what you will, if the patentee has set forth fully the materials, their various proportions, and the processes necessary to the production of this composition of matter, he has done all that the law requires, and should be entitled to its protection. The patent should be carefully examined to find the thing discovered, and if it be clearly set forth, the patentee should not suffer for the imperfection or vagueness of the language used in describing its true extent and nature. The description ought not to be repugnant to the specification; but, provided it honestly sets forth in few words the nature and design of the patent, it is sufficient. It should show what the patentee claims to have discovered or invented, wherein it differs from what was heretofore known, and by what combinations or processes the new material may be compounded. . . . It is essentially proper, in patents for complicated machines, that the specification should clearly set forth what the patentee admits to be old and what he claims to be of his invention. In anomalous cases like the present, when a new product has been discovered, and the process of compounding it or obtaining it is disclosed, the patentee, by stating his discovery and revealing his process, has done all that he is required to do or can do. The careful separation of new from old, the limitation of claims to particular parts or combinations, cannot be required as a substantial part of the specification. If the specification sets forth a discovery, a new composition of matter, and the process for compounding it, that should be taken as the extent of his claim and the measure of his franchise. Now, what is this india-rubber, cured substantially as described in Mr. Goodyear's description? It is clearly not merely an improved

method or process of producing an old and well-known composition or material, but it is a new product, fabric, manufacture, or composition of matter, having qualities possessed by no other known material. This is what is described and claimed in the patent, — a new product as well as a new process.”

In Howe's sewing-machine patent, the first claim of the specification was worded thus: “The forming of the seam by carrying a thread through the cloth, by means of a curved needle on the end of a vibrating arm, and the passing of a shuttle, furnished with its bobbin, in the manner set forth, between the needle and the thread which it carries, under a combination and arrangement of parts substantially the same with that described.”¹ This was construed to be in words a claim for the result, but in reality for the means or mechanism by which that result was to be attained; also, that too much stress should not be laid upon the distinction between a machine and a combination; also, that the patentee's claim was for a general combination, consisting of several sub-combinations, viz., a mechanism for forming the stitch, a mechanism for holding the cloth to be sewed, and a mechanism for feeding the cloth, and that all these general elements in combination and arrangement were set forth in the specification.

Winans' patent for an “improvement in the construction of cars or carriages intended to run on railroads” claimed “the before described manner of arranging and connecting the eight wheels, which constitute the two bearing carriages, with a railroad car, so as to accomplish the end proposed by the means set forth, or by any others which are analogous and dependent upon the same principles.” This claim was construed to be one for the car itself, constructed and arranged as in the patent; consequently, the novelty of the invention was not impeached by evidence showing that parts of the invention had been in use previously.²

The case of *Burr v. Duryee*,³ decided in the United States Supreme Court, on appeal from the Circuit Court of New Jersey, presents an exhaustive discussion of the principles distinguishing an invention for a *machine* from one for a *process*. Burr, the

¹ *Howe v. Morton et al.*; *Howe v. Williams*, per Sprague, J., MS.

² *Ross Winans v. Schenectady & Troy R.R.*, 2 Blatchf. 279.

³ *Burr v. Duryee*, 1 Wallace, 531.

complainant, was assignee of the Wells patent for hat-making; the original patent therefor was granted in 1846, but in 1856 it was surrendered and a reissue obtained. In the spring of 1860 an extension was granted. In January, 1860, a patent was granted to Boyden for improved machinery in hat-making, of which Duryee and others became the assignees. This machinery the complainants, by permission of the defendants, examined. Afterwards, in December, 1860, they surrendered their extended patent and obtained a second reissue, upon the construction of which the decision of the matter in controversy turned. It was held to be an attempt to convert an improved machine into an abstraction, a principle, or mode of operation; a use of general and abstract terms, by which the specification was made so elastic that it might be construed to claim only the machine, or to exclude all previous and future inventions for the same purpose.

Wells, in his original specification, says: "What I claim, &c., is *the arrangement of the two feeding belts (bb') with their planes inclined to each other, and passing around the lips (dd') formed substantially as described, the better to prevent the fibres to the action of the rotating brush (F), as described in combination with the rotating brush and tunnel or chamber (M), which conducts the fibres to the perforated cone or other 'former' placed in front of the aperture or mouth thereof, substantially as herein described. I claim the chamber (M) into which the fibres are thrown by the brush, in combination with the perforated cone or other former, placed in front of the delivery aperture thereof for the purpose and in the manner substantially as herein described, the said chamber being provided with an aperture (N) below and back of the brush, for the admission of a current of air to aid in throwing and directing the fibres on to the cone or other former, as described. I also claim the employment of the hinged hood (s) to regulate the distribution of the fibres on the perforated cone or other former as described. And I also claim providing the lower part or delivery aperture of the tunnel or chamber with a hinged flap (9), for the purpose of regulating the delivery of the fibres to increase the thickness of the hat where more strength is required, as herein described, in combination with the hood as herein described.*" This claim was decided to be a valid one for an improved machine.

The reissue of 1860 ran thus: "The mode of operation of the

said invention of the said Henry Wells is such, that the fur fibres are directed and controlled so as to travel from the picking and disintegrating brush (F) towards the surface of the previous cone, &c., that they may be deposited thereon to the thickness required to make a hat of uniform thickness all the way around, and of the required varying thickness from brim to top; and this *mode of operation* results from combining with a rotary picking and disintegrating brush and a pervious cone or equivalent former, connected with an exhausting apparatus, *suitable means* for directing and controlling the fur-bearing currents. The *said mode of operation invented by the said Henry A. Wells is embodied in the following description of the mode of application*, reference being had to the accompanying drawings, &c. . . . What I claim as the invention of the said Henry A. Wells, &c., is the *mode of operation substantially as herein described, &c.*, which *mode of operation* results from the combination of the rotating picking mechanism or the *equivalent* thereof, the pervious former and its exhausting mechanism or the *equivalent* thereof, and the *means* for directing the fur-bearing current or the *equivalent* thereof, as set forth.”

Judge Grier, in giving the decision of the Supreme Court, said: “The surrender of valid patents and the granting of reissued patents thereon, with expanded or equivocal claims, where the original was clearly neither ‘inoperative nor invalid,’ and whose specification is neither ‘defective nor insufficient,’ is a great abuse of the privilege granted by the statute, and productive of great injury to the public. We concur, therefore, in the decision of the Circuit Court, that the machine of Boyden is not an infringement of the invention of Wells, and if it be an infringement of the reissued patent, that patent is void.” (p. 577.)

Many *v. Jagger et al.*¹ was a suit brought for infringement of the Wolf patent for improvement in cast-iron wheels for railroads and other purposes. The specification was in these words: “We give to the rim of our wheels the same form in all respects as is now given to the rims of car-wheels; but instead of arms, we cast our wheels with two parallel or nearly parallel plates, which plates are convex on one side and concave on the other. The hub, or

¹ Many *v. Jagger*, 1 Blatchf. 372.

nave, which is to receive the axle, is cast in the centre of these plates, extending from one to the other. . . . We are aware that car-wheels have been made with plates as a substitute for arms, but such plates have been made separate from the wheels and united together by screwed bolts, embracing the hub in a distinct piece between them. The difference between such wheels and those constructed by us is so obvious as not to need pointing out.

What we claim as our invention, &c., is the manner of constructing wheels for railroad cars, or for other purposes to which they may be applied, with double convex plates, one convex outwards and the other inwards, and an undivided hub, the whole cast in one piece as herein fully set forth.”

In construing this patent, the court held that the claim was not for the mode of constructing the wheel as distinct from the wheel itself, but was for the car-wheel after it was constructed. Also, that the claim was not for any separate part of the wheel, but for the entire wheel, and that it sufficiently distinguished between the new and the old.

In *Buck v. Hermance*,¹ the words of the claim for a patent in cooking-stoves, “the extending of the oven under the apron or open hearth of the stove, and in combination with the flues constructed as above specified,” were held to be a claim for a *combination* of the extension of the oven under the hearth of the stove *with* the flues, as described.

Booth v. Garely.² Here, a patent for a *new and ornamental design for figured silk buttons*, under act, August 29, 1842, where the specification claimed *the radially formed ornaments on the face of the mould of the button, combined with the mode of winding the covering of the same, substantially as set forth*, and described the configuration of the mould and the winding it with various colored threads, but did not describe the process of winding the silk, was construed not to cover that process, but merely the arrangement of the different colored threads in the process, so as to produce the described ornaments.

In *Oxley v. Holden*,³ the words of the claim for the second part of the invention were: “I claim the metal fixings and the mode

¹ *Buck v. Hermance*, 1 Blatchf. 398.

² *Booth v. Garely*, 1 Blatchf. 247.

³ *Oxley v. Holden*, 8 C. B. n. s. 666.

of applying the same, described herein as the second part of my invention." The claim was construed not to apply to the metal fixings (which were notoriously old and well known) apart from their application.¹

¹ *Oxley v. Holden*, 8 C. B. n. s. 705.

CHAPTER VII.

PROCEEDINGS AT THE PATENT OFFICE.

- I. Caveat for incomplete Invention.
- II. The Petition, Oath, Payment of Fees.
- III. Signatures of the Secretary of the Interior and Commissioner.
- IV. Interfering Applications.
- V. Reissue and Amendment of Patents.

CAVEAT FOR INCOMPLETE INVENTION.

§ 270. THE twelfth section of the act of July 4, 1836, provided that any citizen of the United States, or alien who shall have been resident in the United States one year next preceding, and who shall have made oath of his intention to become a citizen thereof, who shall have invented any new art, machine, or improvement thereof, and shall desire further time to mature the same, may, on payment of the sum of twenty dollars, file in the Patent Office a *caveat*, setting forth the design and purpose thereof, and its principal and distinguishing characteristics, and praying protection of his right till he shall have matured his invention; which sum of twenty dollars, in case the person filing such caveat shall afterwards take out a patent for the invention therein mentioned, shall be considered a part of the sum required for the same. And such caveat shall be filed in the confidential archives of the office, and preserved in secrecy. And if application shall be made by any other person within one year from the time of filing such a caveat, for a patent of any invention with which it may in any respect interfere, it shall be the duty of the commissioner to deposit the description, specifications, drawings, and model in the confidential archives of the office, and to give notice, by mail, to the person filing the caveat, of such application, who shall, within three months after receiving the notice, if he would avail himself of the benefit of his caveat, file his description, specifications, drawings, and model; and if, in the opinion of the commissioner,

the specifications of claim interfere with each other, like proceedings may be had in all respects as are provided in the case of interfering applications.

These provisions were somewhat modified by the Patent Act of 1861 (Laws 1861, c. 88, § 9), which declared, "*And be it further enacted*, That no money paid as a fee on any application for a patent after the passage of this act shall be withdrawn or refunded, nor shall the fee paid on filing a caveat be considered as part of the sum required to be paid on filing a subsequent application for a patent for the same invention. That the three months' notice given to any caveator, in pursuance of the requirements of section twelve, act of July 4th, 1836, shall be computed from the day on which such notice is deposited in the post-office at Washington, with the regular time for the transmission of the same added thereto, which time shall be indorsed in the notice." Section ten of this act of 1861 also abolishes the laws regulating the fees at the Patent Office, and discriminating between citizens of the United States and that of other countries, and provides that the fee for filing each caveat shall be *ten* instead of *twenty* dollars. As to the effect of a caveat upon a subsequent patent, see the ruling of Sprague, J., in *Johnson v. Root*,¹ MS.: "It is contended, on the part of the defendant, that the caveat itself is conclusive evidence that the invention was not perfected. You will observe that the application, which is in the caveat before you, made to the Patent Office by Mr. Johnson for leave to file a caveat, sets forth that he has made a certain new and useful improvement in the sewing-machine, and that he is then making experiments to perfect it, and he asks leave to file a caveat to secure it. The defendant insists that that application is of itself conclusive evidence that he has not perfected it. We will look at it, gentlemen, and see. I do not instruct you that it is conclusive evidence; but it is evidence for you to take into view in connection with the other evidence, and in connection with the other parts of the same instrument, in which he begins by saying that he has made a new and useful invention in the sewing-machine. Now, gentlemen, although a caveat is understood to be, and in this instance is, filed in order to allow the party to perfect his machine, yet if, in point of fact, the invention had been perfected

¹ See also *Johnson v. Root*, 2 Fisher's Pat. Cas. 291.

in the eye of the law, as I have explained to you, then, if you are satisfied of that from the evidence, you may deem it, for the purposes of this trial, as perfected. Or it may happen that a person may choose to file a caveat while he is going on and making improvements upon an invention which he has already completed, so as to be of practical utility. Therefore, gentlemen, I would say to you that you will take into consideration the declaration of the plaintiff himself in the application, that he had made a new and useful improvement in sewing-machines, and the further declaration that he is making experiments in order to perfect his invention, and the subsequent declaration that he has made a new and useful improvement, and the other evidence in relation to the case, — that is, what is described in the caveat and the model made in 1848, — and see if that exhibits to you a perfected machine; and then such further evidence as you have as of the actual operation of the machine that will be before you.

“ Now, gentlemen, if he had perfected it, then he had a right to embrace it in a patent that he should afterwards take out. If he had not perfected it, then another question will arise, and that is, had he invented the feeding mechanism at that time, and did he use due diligence to perfect that and put it into a perfect machine so as to make it of some practical utility. . . . If the invention was perfected, as I have already said, or, if not perfected, if Mr. Johnson used reasonable diligence to perfect it, then he had a right to have it incorporated into his patent, and to supersede those that had intervened between his first discovery and his subsequent taking out of the patent. If he had not perfected it, and did not use due diligence to carry it into effect, and in the mean time, before he got his patent, some one else had invented and used and incorporated into a practical, useful machine that mode of feeding, then he could not, by subsequent patent, appropriate to himself what was embraced in the former machine, between his caveat and the obtaining of his patent.”

§ 270 *a*. The law on this subject is now regulated by the act of 1870, section forty of which provides: “ That any citizen of the United States who shall have made any new invention or discovery, and shall desire further time to mature the same, may, on payment of the duty required by law, file in the Patent Office a caveat setting forth the design thereof, and of its distinguishing characteristics, and praying protection of his right until he shall

have matured his invention ; and such caveat shall be filed in the confidential archives of the office and preserved in secrecy, and shall be operative for the term of one year from the filing thereof; and if application shall be made within the year by any other person for a patent with which such caveat would in any manner interfere, the commissioner shall deposit the description, specification, drawings, and model of such application in like manner in the confidential archives of the office, and give notice thereof, by mail, to the person filing the caveat, who, if he would avail himself of his caveat, shall file his description, specifications, drawings, and model within three months from the time of placing said notice in the post-office in Washington, with the usual time required for transmitting it to the caveator added thereto, which time shall be indorsed on the notice. And an alien shall have the privilege herein granted, if he shall have resided in the United States one year next preceding the filing of his caveat, and made oath of his intention to become a citizen.”

THE PETITION, OATH, PAYMENT OF FEES, ETC.

§ 271. The act of 1836, § 6, required an inventor who desired to obtain a patent to “*make application in writing* to the Commissioner of Patents,” &c. This application in writing has, from the origin of the government, been by way of petition, generally with the specification annexed and referred to, or accompanied by the specification, filed at the same time. The form of the petition is not material, provided it set forth the facts to which the applicant is required to make oath. When filed, it is to be presumed to adopt the specification, or schedule, filed at the same time, and to ask for a patent for the invention therein described.¹

If a party chooses to withdraw his application for a patent and pay the forfeit, intending at the time of such withdrawal to file a new petition, and he accordingly does so, the two petitions are to be considered as parts of the same transaction and as constituting a continuous application, within the meaning of the law. The question of the continuity of the application should be submitted to the jury.² Where an inventor, having made application for a

¹ *Hogg v. Emerson*, 6 How. 437, 480. The rules of the Patent Office give a form of petition which it is advisable to adopt in all cases. See Appendix.

² *Godfrey v. Eames*, 1 Wall. 317.

patent for certain improvements, afterwards, with his claim still on file, makes application for another but distinct improvement in the same branch of art, describing therein the former application, but not claiming it as original, such description and non-claim is not to be considered a dedication of the prior invention.¹

§ 272. The applicant is also required to make oath or affirmation that he does verily believe that he is “the original and first inventor,” &c., “and that he does not know or believe that the same was ever before known or used,” and also of what country he is a citizen; which oath or affirmation may be made before any person authorized by law to administer oaths.²

§ 273. The applicant is required to make oath or affirmation, not that he is the original and first inventor or discoverer, but that he believes himself to be so. He cannot know absolutely whether he first invented or discovered the thing for which he claims a patent, but he may believe that he did; and it is only when he is willing to make oath that he so believes, that the law grants him the patent. A subsequent section of the same statute provides for one case in which a patent shall still be valid, if issued to an applicant who believed himself to be the first inventor or discoverer, although he was not so, in point of fact. This case is where the invention or discovery had been previously known or used in a foreign country, but had not been patented or described in any public work, and the patentee was ignorant of that fact. If the patentee, before making his application, had learned that the thing had been known or used in a foreign country, although not patented or described in any foreign work, he cannot have believed himself to be the first inventor or discoverer. But if he learn the fact after he has taken the oath, it will not invalidate his patent.³

§ 274. An irregularity in the form of the oath will be cured by the issuing of the patent, and it seems that a patent would be valid, when issued, although the oath might not have been taken at all. It has been held that the taking of the oath is only a prerequisite to the granting of the patent, and in no degree

¹ *Suffolk Co. v. Hayden*, 3 Wall. 315.

² Act of July 4, 1836, § 6. The oath extends to all described in the schedule filed with the petition, as well as to the title or description of the invention contained in the petition itself. *Hogg v. Emerson*, 6 How. 437, 482.

³ Act 4th July, 1836, § 15.

essential to its validity; so that if the proper authorities, from inadvertence or any other cause, should grant a patent, where the applicant had not made oath according to the requisitions of the statute, the patent would still be valid. But where the oath has been taken and is recited in the patent, it is the foundation of the *onus probandi* thrown on the party who alleges that the patentee was not the original and first inventor.¹

§ 274 *a*. The taking of the oath, though to be done prior to the granting of the patent, is not a *condition precedent*, in the absence of which the patent will become void. It is the evidence required to be furnished to the Patent Office, that the applicant verily believes he is the original and first inventor.²

§ 275. The ninth section of the Act of 1836 provided, that before any application for a patent shall be considered by the commissioner, the applicant shall pay into the treasury of the United States, or into any of the deposit banks to the credit of the Treasury, if he be a citizen of the United States, or an alien, and shall have been resident in the United States for one year next preceding, and shall have made oath of his intention to become a citizen thereof, the sum of thirty dollars; if a subject of the King of Great Britain, the sum of five hundred dollars.³

These provisions were superseded by the fee-bill contained in the act of March 2, 1861, § 10. *And be it further enacted*, That all laws now in force fixing the rates of the Patent Office fees to be paid, and discriminating between the inhabitants of the United States and those of other countries, which shall not discriminate against the inhabitants of the United States, are hereby repealed, and in their stead the following rates are established:—

On filing each caveat, ten dollars.

On filing each original application for a patent, except for a design, fifteen dollars.

On issuing each original patent, twenty dollars.

On every appeal from the examiner in chief to the commissioner, twenty dollars.

On every application for the reissue of a patent, thirty dollars.

¹ Alden *v.* Dewey, 1 Story's R. 336, 341.

² Crompton *v.* Belknap Mills (1869), 3 Fisher's Pat. Cas. 536. See, also, Whittemore *v.* Cutter, 1 Gal. 429.

³ Act 4th July, 1836, § 9.

On every application for the extension of a patent, fifty dollars; and fifty dollars in addition, on the granting of every extension.

On filing each disclaimer, ten dollars.

For certified copies of patents and other papers, ten cents per hundred words.

For recording every assignment, agreement, power of attorney, and other papers of three hundred words or under, one dollar.

For recording every assignment and other papers over three hundred and under one thousand words, two dollars.

For recording every assignment or other writing, if over one thousand words, three dollars.

For copies of drawings, the reasonable cost of making the same.

§ 275 *a*. The proceedings relating to the application, payment of fees, &c., are now regulated by the act of 1870.¹ Section twenty-six of that act provides: "That before any inventor or discoverer shall receive a patent for his invention or discovery, he shall make application therefor, in writing, to the commissioner, and shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise, 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, and use the same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery; and said specification and claim shall be signed by the inventor and attested by two witnesses."

§ 275 *b*. When the nature of the case admits of drawings, the applicant is required to furnish one copy signed by the inventor or his attorney in fact, and attested by two witnesses, which shall be filed in the Patent Office; and a copy of the drawings, to be furnished by the Patent Office, is to be attached to the patent as part of the specification.² When the invention or discovery is of a composition of matter, the applicant, if required by the commissioner, must furnish specimens of ingredients and of the

¹ See Appendix.

² § 27.

composition sufficient in quantity for the purpose of experiment.¹ And in all cases which admit of representation by model, the applicant, if required by the commissioner, must furnish one of convenient size to exhibit advantageously the several parts of his invention or discovery.²

§ 275 c. Section thirty provides: "That the applicant shall make oath or affirmation that he does verily believe himself to be the original and first inventor or discoverer of the art, machine, manufacture, composition, or improvement for which he solicits a patent; that he does not know and does not believe that the same was ever before known or used; and shall state of what country he is a citizen. And said oath or affirmation may be made before any person within the United States authorized by law to administer oaths, or, when the applicant resides in a foreign country, before any minister, *chargé d'affaires*, consul, or commercial agent holding commission under the Government of the United States, or before any notary public of the foreign country in which the applicant may be."

On the filing of any such application and the payment of the duty required by law, the commissioner is required to cause an examination to be made of the alleged new invention or discovery; and if it appear on such examination that the claimant is justly entitled to a patent under the law, and that the same is sufficiently useful and important, it is made the duty of the commissioner to issue a patent therefor.³

§ 275 d. All applications for patents must be completed and prepared for examination within two years after the filing of the petition, and in default thereof, or upon failure of the applicant to prosecute the same within two years after any action therein, of which notice shall have been given to the applicant, they shall be regarded as abandoned by the parties thereto, unless it be shown to the satisfaction of the commissioner that such delay was unavoidable.⁴

§ 275 e. Where the assignee of the inventor or discoverer, having recorded the assignment in the Patent Office, seeks to obtain letters-patent, the application for the patent must be made and the specification sworn to by the inventor or discoverer; and also, if he be living, in case of an application for reissue.⁵ It was

¹ § 28.

⁴ § 32.

² § 29.

⁵ § 33.

³ § 31.

subsequently enacted that this provision "shall not be construed to apply to patents issued and assigned prior to July 8, 1870."¹

In case of the death of the inventor or discoverer before a patent is granted, the right of applying for and obtaining the patent devolves on his executor or administrator, in trust for the heirs-at-law of the deceased, in case he shall have died intestate; or if he shall have left a will disposing of the same, then in trust for his devisees; and when the application shall be made by such legal representatives, the oath or affirmation required shall be so varied in form that it can be made by them.²

§ 275 *f*. Section thirty-five of the act of 1870 provides: "That any person who has an interest in an invention or discovery, whether as inventor, discoverer, or assignee, for which a patent was ordered to issue upon the payment of the final fee, but who has failed to make payment thereof within six months from the time at which it was passed and allowed, and notice thereof was sent to the applicant or his agent, shall have a right to make an application for a patent for such invention or discovery the same as in the case of an original application: *Provided*, that the second application be made within two years after the allowance of the original application. But no person shall be held responsible in damages for the manufacture or use of any article or thing for which a patent, as aforesaid, was ordered to issue, prior to the issue thereof: *And provided further*, that when an application for a patent has been rejected or withdrawn, prior to the passage of this act, the applicant shall have six months from the date of such passage to renew his application, or to file a new one; and if he omit to do either, his application shall be held to have been abandoned. Upon the hearing of such renewed applications, abandonment shall be considered as a question of fact."

§ 275 *g*. Whenever, on examination, any claim for a patent is rejected for any reason whatever, the commissioner is required to notify the applicant thereof, giving him briefly the reasons for such rejection, together with such information and references as may be useful in judging of the propriety of renewing his application or of altering his specification. If the applicant, after receiving such notice, persist in his claim for a patent with or

¹ Act of March 3, 1871.

² § 34.

without altering his specifications, the commissioner is required to order a re-examination of the case.¹

Section forty-two of the act of 1870 provides: "That whenever an application is made for a patent which, in the opinion of the commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the primary examiner to proceed to determine the question of priority of invention. And the commissioner may issue a patent to the party who shall be adjudged the prior inventor, unless the adverse party shall appeal from the decision of the primary examiner, or of the board of examiners-in-chief, as the case may be, within such time not less than twenty days, as the commissioner shall prescribe."

§ 275 h. The fees established by the act of 1870 are as follows:²

On filing each original application for a patent, fifteen dollars.

On issuing each original patent, twenty dollars.

On filing each caveat, ten dollars.

On every application for the reissue of a patent, thirty dollars.

On filing each disclaimer, ten dollars.

On every application for the extension of a patent, fifty dollars.

On the granting of every extension of a patent, fifty dollars.

On an appeal for the first time from the primary examiners to the examiners-in-chief, ten dollars.

On every appeal from the examiners-in-chief to the commissioner, twenty dollars.

For certified copies of patents and other papers, ten cents per hundred words.

For recording every assignment, agreement, power of attorney, or other paper, of three hundred words or under, one dollar; of over three hundred and under one thousand words, two dollars; of over one thousand words, three dollars.

For copies of drawings, the reasonable cost of making them.

In design cases the rate of fees is as follows:³ —

For three years and six months, ten dollars.

For seven years, fifteen dollars.

For fourteen years, thirty dollars.

For all other cases in which fees are required, the same rates as in cases of inventions or discoveries.

¹ Act of 1870, § 41.

² § 68.

³ § 75.

SIGNATURES OF THE SECRETARY OF THE INTERIOR AND OF THE
COMMISSIONER OF PATENTS.

§ 276. The act of July 4, 1836, c. 357, § 5, provided that patents should be issued from the Patent Office "in the name of the United States, and under the seal of said office, and be signed by the Secretary of State, and countersigned by the commissioner of said office."

The act of 1849, c. 108, § 2, required the Secretary of the Interior to "exercise and perform all the acts of supervision and appeal in regard to the office of Commissioner of Patents, now exercised by the Secretary of State," and so according to the act of 1870, § 21, all patents "shall be signed by the Secretary of the Interior and countersigned by the commissioner."

§ 277. It has been held that the sanction of the Secretary of State (now of the Interior) to a correction of a clerical mistake in letters-patent may be given in writing afterwards; and that he need not re-sign the letters themselves. But the commissioner, if he be the same officer who countersigned the letters originally, may make the correction without re-signing or resealing. If the mistake occurs in the copy of the patent, and not in the record or enrolment, it may be corrected by the commissioner and made to conform to the original. If the mistake in the enrolled patent be a material one, the letters cannot operate except on cases arising after the correction is made; but if the correction be of a clerical mistake only, it operates back to the original date of the letters, unless, perhaps, as to third persons, who have acquired intervening rights to be affected by the alteration.¹

§ 278. It has also been held, that a signature to the patent, and a certificate of copies by a person calling himself "acting commissioner," is sufficient on its face in controversies between the patentee and third persons, as the law recognizes an acting commissioner.²

¹ *Woodworth v. Hall*, 1 Woodb. & M. 248; s. c. *Ibid.* 389.

² *Woodworth v. Hall*, 1 Woodb. & M. 248. Where evidence is offered to prove that the "acting commissioner" who signs a patent was not appointed by the President, it is doubtful whether it is competent in controversies where he is not a party. s. c. 1 Woodb. & M. 389.

REISSUE OR AMENDMENT OF A PATENT.

§ 279. The act of July 4, 1836, § 13, made the following provision in case of a defective or insufficient specification, or of the subsequent invention of something which the patentee wishes to add to his specification.

§ 280. " And be it further enacted: That whenever any patent which has heretofore been granted, or which shall hereafter be granted, shall be inoperative or invalid, by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specification, as his own invention, more than he had or shall have a right to claim as new; if the error has or shall have arisen by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention, it shall be lawful for the commissioner, upon the surrender to him of such patent, and the payment of the further duty of fifteen dollars, to cause a new patent to be issued to the said inventor, for the same invention, for the residue of the period then unexpired for which the original patent was granted, in accordance with the patentee's corrected description and specification. And in case of his death, or any assignment by him made of the original patent, a similar right shall vest in his executors, administrators, or assignees. And the patent so reissued, together with the corrected description and specification, shall have the same effect and operation in law, on the trial of all actions hereafter commenced for causes subsequently accruing, as though the same had been originally filed in such corrected form, before the issuing out of the original patent. [And whenever the original patentee shall be desirous of adding the description and specification of any new improvement of the original invention or discovery which shall have been invented or discovered by him subsequent to the date of his patent, he may, like proceedings being had in all respects as in the case of original applications, and on the payment of fifteen dollars, as hereinbefore provided, have the same annexed to the original description and specification; and the commissioner shall certify, on the margin of such annexed description and specification, the time of its being annexed and recorded; and the same shall thereafter have the same effect in law, to all intents and

purposes, as though it had been embraced in the original description and specification.”¹]

That provision of the section in brackets was abolished by the act of 1861, c. 88, § 9, which provided “that so much of the thirteenth section of the act of Congress, approved July 4, 1836, as authorizes the annexing to letters-patent of the description and specification of additional improvements is hereby repealed. And in all cases where additional improvements would now be admissible, independent patents must be applied for.”

§ 280 *a*. The law on this subject is now regulated by section fifty-three of the act of 1870, which provides; “That whenever any patent is inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the commissioner shall, on the surrender of such patent and the payment of the duty required by law, cause a new patent for the same invention, and in accordance with the corrected specifications, to be issued to the patentee, or, in the case of his death or assignment of the whole or any undivided part of the original patent, to his executors, administrators, or assigns for the unexpired part of the term of the original patent, the surrender of which shall take effect upon the issue of the amended patent; and the commissioner may, in his discretion, cause several patents to be issued for distinct and separate parts of the thing patented, upon demand of the applicant, and upon

¹ The act of March 3, 1837, § 8, made a further provision on this subject:—

“And be it further enacted, That, [whenever application shall be made to the commissioner for any addition of a newly discovered improvement to be made to an existing patent, or] whenever a patent shall be returned for correction and reissue, the specification of claim annexed to every such patent shall be subject to revision and restriction, in the same manner as are original applications for patents; the commissioner shall not [add any such improvement to the patent in the one case, nor] grant the reissue in the other case, until the applicant shall have entered a disclaimer, or altered his specification of claim in accordance with the decision of the commissioner; and in all such cases the applicant, if dissatisfied with such decision, shall have the same remedy and be entitled to the benefit of the same privileges and proceedings as are provided by law in the case of original applications for patents.” The parts in brackets are repealed by act of 1861, c. 88, § 9.

payment of the required fee for a reissue for each of such reissued letters-patent. And the specification and claim in every such case shall be subject to revision and restriction in the same manner as original applications are. And the patent so reissued, together with the corrected specification, shall have the effect and operation in law, on the trial of all actions for causes thereafter arising, as though the same had been originally filed in such corrected form; but no new matter shall be introduced into the specification, nor in case of a machine patent shall the model or drawings be amended, except each by the other; but when there is neither model nor drawing, amendments may be made upon proof satisfactory to the commissioner that such new matter or amendment was a part of the original invention, and was omitted from the specification by inadvertence, accident, or mistake, as aforesaid."

In the cases of patents issued and assigned prior to the act of July 8, 1870, the application for reissue may be made by the assignee; but in the case of patents issued or assigned since that date the application must be made and the specification sworn to by the inventor, if he be living.¹

§ 281. The object of conferring this power of surrender and reissue is to enable patentees to remedy accidental mistakes. In a recent case the court took the opportunity of pointedly condemning a practice which had sprung up of late, and which consists in surrendering valid patents and obtaining reissues for the purpose of inserting therein expanded and equivocal claims.²

¹ See section 275 *e*.

² *Burr v. Duryee*, 1 Wallace, 531. "Since the date of this act, not only the Patent Office, but the bar can furnish gentlemen fully competent to the task of drawing up proper specifications, and but little liable to commit blunders from inadvertency. Specifications now seldom issue from the Patent Office to which such an imputation can be made. Nevertheless, this privilege of surrender and reissue is resorted to more frequently than ever. Formerly, when in course of investigation in a court of justice it was discovered that a patent was invalid, for any of the reasons mentioned in the act, it was resorted to. Now, after a patent has been declared to be valid, the specification without defect, and the claim for nothing more than the invention, after it has undergone examination for many years, and courts and juries have decided that the patent is *not* invalid through inadvertency, accident, or mistake, the assignees come forward and make oath that the inventor's original patent is 'unavailable' for some purpose unnecessary to be divulged. In the present case, the purpose is transparent. The specification of this reissued patent,

Inasmuch as it is the duty of the commissioner of patents to see that a reissue does not cover more than the original, the reissue is to be presumed to be for the same invention until the contrary be shown. Variations in the two patents do not necessarily imply that the subsequent one is for a different discovery. The right to surrender the old patent and receive another in its place was given for the purpose of enabling the patentee to give a more perfect description of his invention, when any mistake or oversight was committed in the first. If a separate invention is covered by one of the claims in a surrendered patent, and that claim, as there made, is void, the patentee may take a distinct patent therefor.¹

Whether the defect be in the description or the claim, the patentee may surrender his patent, and, by an amended specification, cure the defect. A substantially new and different invention cannot be claimed; but where the specification or claim is made so vaguely as to be inoperative or invalid, yet an amendment may give to it validity. The patentee has a right to restrict or enlarge his claim so as to give it validity and effectuate his invention.²

A patent which is extended by a special act of Congress becomes thereby a patent for the period of twenty-eight years from its original date, and a surrender and reissue thereof after such extension stand on the same footing as if they had been made in the case of a patent for twenty-one years.³

§ 282. The question has been raised, how far the decision of the commissioner of patents upon the existence of a defect in instead of describing first the *machine* and the several devices which exhibit its peculiar mode of operation in order to produce the desired effect, and stating what the patentee claims as his peculiar invention, commences by describing 'a *mode of operation*' as the thing intended to be patented, and uses these words: The said *mode of operation* invented by the said Henry A. Wells is embodied in the following description of the mode of application. The claim is for the mode of operation substantially as herein described.

"We have no leisure for a further development of this novel form of patent, or how, by the use of general and abstract terms, the specification is made so elastic that it may be construed to claim only the machine, or so expanded as to include all previous or future inventions for the same purpose."

¹ O'Reilly v. Morse, 15 How. 62.

² Battin v. Taggert, 17 How. 74. Reversing the same case in 2 Wallace, C. C. R. 101.

³ Gibson v. Harris, 1 Blatchf. 167. (1846.)

the specification, arising from inadvertence, accident, or mistake, is re-examinable elsewhere. It becomes important when, in an action under the reissued patent, the defence is set up that the reissue is for a different invention from that described in the surrendered patent. Inasmuch as the descriptions in the two patents necessarily differ, it follows that if the commissioner's decision is open to re-examination, so that the fact of the existence of defects in the former patent can be inquired into, the defendant is at liberty to show that the reissued patent is not for the same invention as that covered by the surrendered one. But if, on the other hand, the commissioner's action in the matter of surrender and reissue is conclusive, then the granting of a new patent, as provided by statute, precludes all inquiry into the fact whether it was or was not rightly granted, and makes the new patent of necessity applicable to the same invention as the old.

Under the act of 1832 the Supreme Court held that the reissue of a patent by the commissioner was *primâ facie* evidence that the proofs of defect required by the statute had been regularly furnished and were satisfactory.¹ Subsequently, under the act of 1836, the same court appears to have considered the granting of the renewed patent as so far conclusive upon the question of the existence of error in the original patent arising from inadvertency, accident, or mistake, that nothing remained open but the fairness of the transaction; that the question of fraud might be raised, and that this was for the jury; but that, unless the surrender and renewal were impeached by showing fraud, the reissue must be deemed conclusive proof that the case provided for by the statute existed.²

This view is also taken in *Woodworth v. Stone*, *Allen v. Blunt*, incidentally affirmed in *O'Reilly v. Morse*, and expressly affirmed in *Potter v. Holland*.³

¹ *The Philadelphia and Trenton R.R. Co. v. Stimpson*, 14 Pet. 448.

² *Stimpson v. Westchester R.R. Co.*, 4 How. 380.

³ *Woodworth v. Stone*, 3 Story's R. 749, 753. In this case, which was in equity, the learned judge said: "But the most material objection taken is, that the new patent is not for the same invention as that which has been surrendered. And certainly, if this be correct, there is a fatal objection to the prolongation of the injunction. But is the objection well founded, in point of fact? It is said, that the present patent is for a combination only, and that the old patent was for a combination and something more, or different. But

§ 282 *a*. In the case of *Jordan v. Dobson*,¹ decided by the Circuit Court of Pennsylvania in 1870, it appeared that in 1863

I apprehend that, upon the face of the present patent, the question is scarcely open for the consideration of the court; and, at all events, certainly not open in this stage of the cause. I have already, in another cause, had occasion to decide, that where the commissioner of patents accepts a surrender of an old patent and grants a new one, under the act of 1836, c. 357, his decision, being an act expressly confided to him by law, and dependent upon his judgment, is not re-examinable elsewhere; and that the court must take it to be a lawful exercise of his authority, unless it is apparent, upon the very face of the patent, that he has exceeded his authority, and there is a clear repugnancy between the old and the new patent, or the new one has been obtained by collusion between the commissioner and the patentee. Now, upon the face of it, the new patent, in the present case, purports to be for the same invention and none other, that is contained in the old patent. The avowed difference between the new and the old is, that the specification in the old is defective, and that the defect is intended to be remedied in the new patent. It is upon this very ground that the old patent was surrendered and the new patent was granted. The claim in the new patent is not of any new invention, but of the old invention more perfectly described and ascertained. It is manifest that, in the first instance, the commissioner was the proper judge whether the invention was the same or not, and whether there was any deficit in the specification or not, by inadvertence, accident, or mistake; and consequently he must have decided that the combination of machinery claimed in the old patent was, in substance, the same combination and invention claimed and described in the new. My impression is, that at the former trial of the old patent before me, I held the claim substantially (although obscurely worded) to be a claim for the invention of a particular combination of machinery, for planing, tongueing, and grooving, and dressing boards, &c.; or, in other words, that it was the claim of an invention of a planing-machine or planing apparatus such as he had described in his specification.

“It appears to me, therefore, that *primâ facie*, and at all events in this stage of the cause, it must be taken to be true, that the new patent is for the same invention as the old patent; and that the only difference is, not in the invention itself, but in the specification of it. In the old, it was defectively described and claimed. In the new, the defects are intended to be remedied. Whether they are effectually remedied is a point not now properly before the court. But as the commissioner of patents has granted the new patent as for the same invention as the old, it does not appear to me that this court is now at liberty to reverse his judgment, or to say that he has been guilty of an excess of authority, at least (as has been already suggested) not in this stage of the cause; for that would be for the court of itself to assume to decide many matters of fact as to the specification and the combination of machinery in both patents, without any adequate means of knowledge or of guarding

¹ 2 Abbott's U. S. Rep. 398.

the complainant had become the owner by assignment of a patent for a new and useful improvement in machinery for the

itself from gross error. For the purpose of the injunction, if for nothing else, I must take the invention to be the same in both patents, after the commissioner of patents has so decided, by granting the new patent."

In *Allen v. Blunt*, 3 Story's R. 742, 743, which was an action at law, the same judge observed: "The thirteenth section of the Patent Act of 1836, c. 357, enacts, that whenever any patent shall be inoperative or invalid, by reason of a defective or insufficient description or specification, or by reason of the patentee claiming in his specification, as his own invention, more than he had, or shall have a right to claim as new, if the error has or shall have arisen by inadvertency, accident, or mistake, and without any fraudulent or deceptive intention, it shall be lawful for the commissioner, upon the surrender to him of such patent, and the payment of the further duty of fifteen dollars, to cause a new patent to be issued for the same invention for the residue of the term then unexpired, for which the original patent was granted, in accordance with the patentee's corrected description and specification. Now, the specification may be defective or insufficient, either by a mistake of law, as to what is required to be stated therein in respect to the claim of the inventor, or by a mistake of fact, in omitting things which are indispensable to the completeness and exactness of the description of the invention, or of the mode of constructing, or making, or using the same. Whether the invention claimed in the original patent, and that claimed in the new amended patent, is substantially the same, is and must be in many cases a matter of great nicety and difficulty to decide. It may involve consideration of fact as well as of law. Who is to decide the question? The true answer is, the commissioner of patents; for the law intrusts him with the authority, not only to accept the surrender, but to grant the new amended patent. He is bound, therefore, by the very nature of his duties to inquire into and ascertain whether the specification is sufficient or insufficient, in point of law or fact, and whether the inventor has claimed more than he has invented, and in such case whether the error has arisen from inadvertency, accident, or mistake, or with a fraudulent or deceptive intention. No one can well doubt, that in the first instance, therefore, he is bound to decide the whole law and facts arising under the application for the new patent. *Primâ facie*, therefore, it must be presumed that the new amended patent has been properly and rightfully granted by him. I very much doubt whether his decision is or can be re-examinable in any other place, or in any other tribunal, at least, unless his decision is impeached on account of gross fraud or connivance between him and the patentee; or unless his excess of authority is manifest upon the very face of the papers; as, for example, if the original patent were for a chemical combination, and the new amended patent were for a machine. In other cases, it seems to me, that the law, having intrusted him with authority to ascertain the facts, and to grant the patent, his decision, *bonâ fide* made, is conclusive. It is like many other cases, where the law has referred the decision of a matter to the sound discretion of a public officer, whose adjudication becomes conclusive. Suppose the Secretary of the Treas-

manufacture of wool and other fibrous material originally granted to John Goulding. The patent was first issued in 1826, and in 1836 was surrendered, and a reissue obtained. An extension of the patent was not obtained by the patentee before the expiration of the time for which it was originally issued, but under the act of Congress of May 30, 1862, empowering the commissioner of patents to grant renewals and extensions for the term of seven

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 ury should remit a penalty or forfeiture incurred by a breach of the laws of the United States, would his decision be re-examinable in any court of law upon a suit for the penalty or forfeiture? The President of the United States is by law invested with authority to call forth the militia to suppress insurrections, to repel invasions, and to execute the laws of the Union; and it has been held by the Supreme Court of the United States, that his decision as to the occurrence of the exigency is conclusive. *Martin v. Mott*, 12 Wheat. R. 19. In short, it may be laid down as a general rule, that, where a particular authority is confided to a public officer, to be exercised by him in his discretion upon the examination of facts, of which he is made the appropriate judge, his decision upon these facts is, in the absence of any controlling provisions, absolutely conclusive as to the existence of those facts. My opinion, therefore, is, that the grant of the present amended patent by the commissioner of patents is *conclusive as to the existence of all the facts, which were by law necessary to entitle him to issue it*; at least, unless it was apparent on the very face of the patent itself, without any auxiliary evidence, that he was guilty of a clear excess of authority, or that the patent was procured by a fraud between him and the patentee, which is not pretended in the present case.”

Potter et al. v. Holland. “The power and duty of granting a new patent for the original invention, when a lawful surrender of the old patent has been made, are by law expressly confided to the commissioner. The decision made by him in this case is that the reissued patents are for the same invention originally discovered and intended by the patentee to be secured by the original patent. That decision the law has confided to his judgment. The court must take that decision as a lawful exercise of his authority. It is not re-examinable here, unless it is apparent upon the face of the patent that the commissioner has exceeded his authority, or unless there is a clear repugnancy between the old and the new patents, or unless the new one has been obtained by collusion between the commissioner and the patentee. *Woodworth v. Stone*, 3 Story, 749. It is not apparent upon the face of either of the reissued patents that the commissioner, in granting the same, has exceeded his authority; neither does there appear to be any clear repugnancy between the old and the new patents; nor is there any satisfactory evidence to show that either of the new patents was obtained by collusion between the commissioner and patentee. The exception, therefore, taken by the defendant, that the invention secured by the reissued patents was not the invention of the patentee when the original patent was granted, and was not intended by him to be secured by that patent, must fail.” 4 Blatchf. 206. See also *Blake v. Stafford*, 3 Fisher’s Pat. Cas. 294.

years, the patent was extended by the commissioner for seven years from August 20, 1862. In the following year the complainant became the owner, and on June 28, 1864, this extended patent was surrendered and reissued to the complainant for the remainder of the seven years.

Upon this state of facts, in a suit brought by the complainant for infringement, it was contended, on behalf of the defendant, that when the reissue was granted, in 1836, the surrender was not made, as alleged, because the original patent was inoperative and invalid by reason of a defective specification, without any fraudulent or deceptive intention, but that the surrender was made and the reissued letters-patent were obtained with a fraudulent and deceptive intention of including important changes not a part of the invention of the patentee. The same allegation was made respecting the surrender of the extended patent and its reissue to the complainant in 1864. It was thereupon contended that, by reason of such fraudulent and deceptive intention, the reissued patents were void.

The court, however, held that as it was the duty of the commissioner, before granting a reissue, to determine whether the defect or insufficiency of the original specification arose from inadvertence, accident, or mistake, or originated in a fraudulent intention, his decision was conclusive, and "not re-examinable, except, perhaps, so far as he decided there was no fraud." In a suit, therefore, founded upon a reissued patent, the courts must presume that the commissioner duly performed his duty of ascertaining that the defect in the original specification was owing to inadvertence, accident, or mistake; and that the amended description is of the same invention as was covered by the original patent.

§ 282 *b*. In a very recent case¹ the Supreme Court of the United States fully considered the question, how far it was competent to go behind the action of the commissioner in extending a patent, and inquire into the frauds by which the extension was alleged to have been procured. It was there definitely settled that in a suit for infringement, whether of a reissued or an extended patent, the defendant is not at liberty to question the decision of the commissioner in granting such reissue or surrender

¹ *Rubber Company v. Goodyear* (December, 1869), 9 Wall. 788; s. c. 2 Clifford, 375.

upon the ground of fraud. By this decision the door has been closed against showing fraud in procuring reissued or extended patents as a defence in a suit for infringement of such reissued or extended patent; but it decides nothing as to whether the patent may be impeached on the ground of fraud in a proceeding had directly for that purpose.

In giving the reasons by which the court was led to this conclusion, Mr. Justice Swayne said: "The extension was granted by the commissioner pursuant to the first section of the act of 1848 and the eighteenth section of the act of 1836. The latter declares that upon the making and recording of the certificate of extension 'the said patent shall have the same effect in law as though it had been originally granted for the term of twenty-one years.' The law made it the duty of the commissioner to examine and decide. He had full jurisdiction. The function he performed was judicial in its character. No provision is made for appeal or review.¹ His decision must be held conclusive until the patent is impeached in a proceeding had directly for that purpose according to the rules which define the remedy, as shown by the precedents and authorities upon the subject. We are not, therefore, at liberty to enter upon the examination of the evidences of fraud to which we have been invited by the counsel for the appellants. The door to that inquiry in this case is closed upon us by the hand of the law. The rule which we have thus laid down is intended to be limited to the class of cases to which, as respects the point in question, the one before us belongs. We decide nothing beyond this."

This ruling was approved and applied by the same court in the subsequent cases of *Eureka Company v. Bailey Company*,² and *Seymour v. Osborne*.³ In the latter the law was stated in the following language: "Where the commissioner accepts a surrender of an original patent, and grants a new patent, his decision in the premises, in a suit for infringement, is final and conclusive, and is not re-examinable in such a suit in the Circuit Court, unless it is apparent upon the face of the patent that he has exceeded his authority; that there is such a repugnancy between the old and the new patent that it must be held, as matter of

¹ *Foley v. Harrison*, 15 How. 448.

² 11 Wall. 488.

³ *Ibid.* 516.

legal construction, that the new patent is not for the same invention as that embraced and secured in the original patent.”¹

Since the announcement of the doctrine by the Supreme Court that a person sued as an infringer cannot abrogate a reissued or

¹ Seymour v. Osborne, 11 Wall. 516. See also Battin v. Taggart, 17 How. 83; O'Reilly v. Morse, 15 How. 111, 112; Sickles v. Evans, 2 Clifford, 222; Allen v. Brunt, 3 Story, 744. In the Rubber Company v. Goodyear, the court said: “Can we go behind the action of the commissioner in extending the patent, and inquire into the frauds by which it is alleged that the extension was procured? The fifth section of the act of 1790 provided for the repeal of patents under the circumstances and in the manner specified. This act was repealed by the act of 1793. The tenth section of that act re-enacted the fifth section of the act of 1790. The fifth section of the latter act authorized substantially the same defences in suits upon patents which are allowed by the fifteenth section of the act of 1836, with the further provision, that if the facts touching either defence were established, ‘judgment shall be rendered for the defendant with costs, and the patent shall be declared void.’ This act continued in force until it was repealed by the act of 1836. These provisions were not then, and they have not since been re-enacted. The sixteenth section of the act of 1836 authorizes a court of equity, in cases of interference, to take jurisdiction and annul the patent issued to the party in the wrong. Beyond this the patent laws are silent upon the subject of the exercise of such authority. This review furnishes a strong implication that it was the intention of Congress not to allow a patent to be abrogated in any collateral proceeding, except in the particular instance mentioned, but to leave the remedy in all other cases to be regulated by the principles of general jurisprudence. To those principles we must look for the solution of the question before us. The subject was examined by Chancellor Kent with his accustomed fulness of research and ability, in Jackson v. Lawton (10 Johnson, 23). He there said: ‘Unless letters-patent are absolutely void on the face of them, or the issuing of them was without authority, or was prohibited by statute, they can only be avoided in a regular course of pleading, in which the fraud, irregularity, or mistake is regularly put in issue. The principle has been frequently admitted, that the fraud must appear on the face of the patent to render it void in a court of law, and that when the fraud or other defect arises on circumstances, *dehors* the grant, the grant is voidable only by suit (1 Hening and Munford, 19, 187; 1 Munford, 134). The regular tribunal is chancery, founded on a proceeding by *scire facias* or by bill or information.’ The patent in that case was for land, but, as regards the point here under consideration, there is no distinction between such a patent and one for an invention or discovery. If there be, the case is stronger as to the latter. In the case of Field v. Seabury, the patent was also for land. This court ruled the point in like manner, and the same remarks apply. Viewing the subject in the light of the principle involved, we can see no defect in the parallelism between that case and the one before us.”

extended patent by showing that it had been obtained by fraud, it has come to be regarded as the better opinion that all matters of fact connected with the surrender and reissue of a patent are conclusively settled by the decision of the commissioner granting the reissued patent. Matters of construction, however, arising upon the face of the instrument, are still open to examination.¹

§ 282 *c.* It is clearly settled, both by the statute authorizing reissues and by the construction put upon it by the courts, that the reissued letters-patent must be for the same invention as that embraced in the original patent. Consequently where it appears by a comparison of the two instruments, as matter of law, that the invention covered by the reissued patent is substantially different from that embodied in the original, the former must be held to be invalid, because no jurisdiction to grant such a patent is vested in the commissioner.

It is not disputed that the commissioner is authorized to allow the patentee, if his patent is inoperative or invalid, to redescribe his invention in an amended specification. In so doing the patentee is not rigidly confined to what was described before, but he may include in the new description whatever else was suggested or substantially indicated in the old, provided it was properly embraced in the invention as actually made and

¹ *Seymour v. Osborne*, 11 Wall. 516; *Rubber Co. v. Goodyear*, 9 Wall. 796. See also *American Wood Paper Co. v. Glen's Falls Paper Co.*, 8 Blatchf. 513; s. c. 4 Fisher's Pat. Cas. 324; and *Parkham v. The American Button-hole, Overseaming, and Sewing-Machine Co.*, 4 Fisher's Pat. Cas. 468. In the last-named case Mr. Justice McKennan said: "The only ground, then, on which the allowance of a reissued patent is open to objection is that the commissioner has exceeded his authority in granting a reissue for an invention different from the one embraced in the original patent. If both are for the same invention, the decision of the commissioner is unimpeachable, and the reissued patent, with the new specification, is to be substituted for the old as the evidence of the patentee's title and of the nature and object of his invention. Differences in the description and claims of the old and the new specifications are not the tests of substantial diversity, but the description may be varied, and the claim restricted or enlarged, provided the identity of the subject-matter of the original patent is preserved. Within this range, whatever change is required to protect and effectuate the invention is allowable. *Battin v. Taggert*, 17 How. 84. Nor is the alleged discrepancy to be determined by a reference exclusively to the two specifications; the drawings and model filed with the original specification are also proper subjects of consideration and are often of decisive weight. *Seymour v. Osborne*, 11 Wall. 516."

perfected. But interpolations of new features, ingredients, or devices which were neither described, suggested, nor indicated in the original patent, and which would make the reissued patent for a substantially different invention from that embraced in the original, are not allowed, and will render the reissued patent void. If the patentee has claimed as new more than he was entitled to claim, or if the description, specification, or claim is defective or insufficient, he is accorded the privilege of correcting such description, specification, or claim; but he cannot, under such an application, make material additions to the invention which were not substantially embraced in the letters-patent surrendered.

Whether a reissued patent is for the same invention as that embodied in the original patent, or for a different one, is a question of construction for the court, to be determined by a comparison of the two instruments. In performing this duty the court will be aided by the testimony of expert witnesses, if either or both of the instruments contain technical terms requiring such assistance in ascertaining the true meaning of the language employed.¹ The rule on this point has been clearly stated by Mr. Justice Clifford: "Where the specification and claim, both in the original and reissued patents, are expressed in ordinary language, without employing any technical terms or terms of art, the question whether the reissued patent is for the same invention as that described in the original patent or for a different one is purely a question of construction; but where both or either contain technical terms or terms of art the court may hear the testimony of scientific witnesses to aid the court in coming to a correct conclusion. Cases doubtless arise where the language of the specification and claim, both of the surrendered and reissued patents, is so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning. Both parties in such a case would have a right to examine such witnesses, and it would undoubtedly be error in the court to reject the testimony, but the case before the court is not of a character to render it expedient to pursue the inquiry."²

¹ *Seymour v. Osborne*, 11 Wall. 516; *Sickles v. Evans*, 2 Clifford, 203.

² *Bischoff v. Wethered*, 9 Wall. 814; *Betts v. Menzies*, 4 Best & Smith, Q. B. 999.

“Apply the rule to the present case, that the question is one of construction, and it is clear that the defence under consideration is not open to the respondents, as they did not introduce in evidence the original letters-patent from which the reissued patents were derived.”¹

In a very recent case it was held that a principle, although known to the patentee when he made his invention, could not be incorporated in a reissue, if it was not described in the original patent.²

§ 282 *d*. There is a recent case where the reissued patent contained a broader claim and invention than was embraced in the original, but under the following circumstances. Herman E. and Charles H. Davidson, inventors of a new and useful syringe, having applied for a patent therefor in the proper form, the commissioner of patents refused to grant the patent except upon a limited claim, which he suggested, narrowing the invention. This decision of the commissioner was based upon the ground that a prominent feature of the invention, as claimed by the Davidsons, had been anticipated by prior improvements made by other parties. The applicants acquiesced in the rejection, and, having submitted an amended and restricted claim, received a patent in accordance therewith. Subsequently it was discovered that the invention, supposed by the commissioner to have anticipated that of the Davidsons, presented no legal objection to the claim as first presented by them to the Patent Office. Accordingly a surrender and amendment of the claim restoring it to its original form were allowed, and a reissue was granted coextensive with the invention as originally claimed.

On this state of facts it was contended, on the part of the defendants (the appellants), that the original patent not being either “inoperative or invalid,” and the specification not being “defective or insufficient,” the case did not come within the provisions of the thirteenth section of the act of 1836, and the reissue therefore was without authority of law. The court, however, did not accept this construction, but held that, the error or mistake having been made by the commissioner himself, he not only had full authority to grant the amendment and thus correct

¹ Seymour v. Osborne, 11 Wall. 516.

² Dyson v. Danforth, 4 Fisher's Pat. Cas. 133.