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THE LAW OF PATENTS.

THE
LAW OF PATENTS

FOR
USEFUL INVENTIONS.

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IN THREE VOLUMES.

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BOOK III.
OF LETTERS-PATENT.

VOL. II. — 1

TREATISE

ON

THE LAW OF PATENTS.

BOOK III.

OF LETTERS-PATENT.

PRELIMINARY ANALYSIS.

§ 415. The Patent Privilege Created and Defined by the Grant of Letters-Patent.

THAT act of the government by which it confers on an inventor the right to the exclusive public use of his invention is the grant of letters-patent. Prior to this act, whatever right he has in his discovery is vested in him only by the law of nature, and is limited to the free use of his invention by himself, subject to its equally free imitation or re-invention by others. But by the grant of letters-patent his right to use becomes an exclusive one. While his own privileges in reference to the discovery are not enlarged, the privileges which the law of nature confers on other persons are suspended, and pending the term of his patent the whole control over the invention resides in him alone. The issue of a patent is therefore, to all intents and purposes, the creation of a new right in favor of the inventor, — the right to exclude all other persons from the use of the invention, — and bestows on him a true monopoly, whose character and extent, as well as duration, the government must specifically define. Of this exclusive privilege the letters-patent are at once the measure and the evidence. By them

the scope of the invention patented is conclusively determined, and the line drawn between those objects which lie open to unrestricted use and those which none but the inventor can lawfully employ. On them depend, on the one hand, the entire commercial value of the invention, with the consequent reward of the inventor, and on the other hand, the privileges still remaining in the public. Hence it becomes most important that in them the invention should be accurately pointed out, and that by them the rights of the inventor should be permanently established within the precise limits which the nature of his discovery and its position in the arts require.

§ 416. Patent Office Established to Secure the Issue of Legal and Correct Letters-Patent.

It is to secure this accuracy in the description of the invention in the letters-patent, and to fix this precise limit between the rights of the inventor and the public, that the Patent Office of the United States has been created. To this department of the government have been committed the interests of individual inventors as well as those of the whole community, so far as they depend upon the progress of the industrial arts. To it the inventor has recourse if he wishes for protection while completing his discovery and reducing it to practice. To it he applies, when his inventive act is finished, for the patent by which his monopoly is to be conferred. By it his application is examined, the novelty and utility of his alleged invention are determined, the language he has used in its description, or in the statement of his claims, is corrected and made to correspond with the real character of his invention, and the controversies between himself and rival inventors are decided. The proceedings necessary to the performance of these various functions and to the securing of these different results have developed, under successive acts of Congress and the decisions of the courts and the Commissioner, into an elaborate system of laws and regulations, in accordance with which all applications for letters-patent must be prepared, submitted, scrutinized, and granted or denied.

§ 417. Authority of Patent Office to Amend Defective Letters-Patent.

Notwithstanding all available diligence and skill on the part of inventors in describing their inventions, and all the care of the Patent Office in examining them, errors often occur in letters-patent, which, if allowed to remain and govern the reciprocal rights of the inventor and the public, would be productive of serious injustice. The law has therefore authorized the correction of these errors, even after the patent is issued by the government, and although it has controlled the relations of the inventor and the public for a long period of time. These errors result mainly from an excess in the description of the invention in the letters-patent, whereby the inventor has received a grant of the exclusive use of more than he has himself invented; or, on the contrary, from some omission or inaccuracy in the description, whereby the right secured by the patent is more limited than that to which the nature of his invention has entitled him. In either case, an application to the Patent Office for the amendment of his letters-patent becomes necessary,—an application which is always granted where the error has occurred without his own misconduct or neglect.¹

§ 418. Illegal Letters-Patent Repealed, not by Patent Office but by Courts.

The same power which can create a patent privilege can also, when it becomes necessary, destroy it. The authority to grant letters-patent when the required conditions are performed implies an authority to repeal them whenever it is ascertained that the grant had been improperly conferred. Thus, although the Constitution authorizes Congress only to secure to inventors their exclusive rights, yet it has always claimed and exercised the power to provide methods for invalidating its own grants upon discovering that the patentee had no right to retain them. This power, however, has not been confided to the Patent Office; for a patent, when once issued, passes beyond the control of that department, except for the purpose of amendment on the application of the

§ 417. ¹ See §§ 633-715 and notes, *post*.

patentee. All questions as to the repeal of patents fall within the jurisdiction of the courts of the United States, and the proceedings instituted for that object are regulated by the statutes or the general provisions of the law.¹

§ 419. *Letters-Patent Interpreted by the Courts.*

The grant of an exclusive privilege to an inventor creates a contract relation between himself and the public, the obligations of which, on both sides, are expressed in the letters-patent. A patent is thus a written agreement by which the rights and duties of the inventor on the one hand, and of the people at large upon the other, are defined. Like every other contract, the character and scope of these rights and duties depend upon the terms of the patent as interpreted by the courts, and this interpretation is governed by the same general rules which are applied in construing any written obligation between one party and another. Whatever may have been the real nature of the invention, or the true intention of the inventor in describing it, or even the limits which the Patent Office has attempted to establish for his exclusive rights, the monopoly actually secured by the patent is ascertained and determined by the judicial construction given to its various provisions. In the last resort the patent privilege is, therefore, measured by the judgment of the courts; and hence the legal doctrines applied in construing contracts are always to be borne in mind when the letters-patent, or the documents preliminary to them, are to be prepared.¹

§ 420. *Rights Created by Letters-Patent Transferrable.*

The right conferred by the grant of letters-patent is the right to the exclusive use of the invention during a specific period of time. This right differs, in some respects, from the right to the invention itself. The right to the invention vests in the inventor by virtue of his own creative act, and under existing laws includes the right not only to use it without a patent, but to obtain a patent for it, and under certain circumstances to procure an extension of that patent for an ad-

§ 418. ¹ See §§ 716-730 and notes, *post.*

§ 419. ¹ See §§ 731-751 and notes, *post.*

ditional term of years. The right created by the letters-patent is collateral to the right to the invention, and consists in the authority to prohibit other persons from making, using, or selling the patented art or instrument during the time named for the continuance of the monopoly. Like the right to the invention, however, this right may be transferred to others, either as an entirety or in subdivisions, and for such periods and upon such conditions as the inventor may desire. All these conveyances are limited in their effect by the interpretation given to the patent by the courts, and the titles of all who claim an interest in the patent relate back to the original letters-patent as the source from which they spring.¹

§ 421. **Extension of Letters-Patent: General Divisions of the Law Relating to Letters-Patent.**

From an early period the law has taken notice of the fact that during the original term for which the monopoly was granted the inventor may, from circumstances not within his own control, fail to obtain the entire recompense which he deserves; and it therefore has provided, sometimes in one method, sometimes in another, for the extension of the letters-patent after the first term has expired. This duty is also confided, wholly or in part, to the Patent Office; and when exercised completes the series of invaluable services which that department of the government has been empowered to render to the meritorious inventor.¹ Thus it appears that the provisions of Patent Law concerning those letters-patent by which the rights of the inventor and the public are defined, and the titles of the patentee and his transferees to the exclusive use of the invention are established, relate to six principal subjects: —

- I. The Grant of Letters-Patent.
- II. The Amendment of Letters-Patent.
- III. The Repeal of Letters-Patent.
- IV. The Construction of Letters-Patent.
- V. The Transfer of Letters-Patent.
- VI. The Extension of Letters-Patent.

§ 420. ¹ See §§ 752-834 and notes, *post.*

§ 421. ¹ See §§ 835-845 and notes, *post.*

CHAPTER I.

OF THE GRANT OF LETTERS-PATENT.

§ 422. Grant of Letters-Patent Governed by Statute and by Rules of Patent Office: Authority of such Rules.

The proceedings relating to the grant of letters-patent are regulated in part by the acts of Congress, and in part by rules established by the Patent Office itself. While the general features of these proceedings may properly be made the subject of permanent provisions in the statutes, their numerous and ever varying details can be controlled only by the vigilant and flexible authority of the department in which they arise. For this reason power has been conferred upon the Commissioner of Patents to adopt such regulations as he may deem expedient for the conduct of the business committed to his charge. These rules are subordinate to the statutes, and if inconsistent with them are invalid, but otherwise are of the same obligation as the acts of Congress.¹ Officers of the department, as well as parties and attorneys, are bound to recognize and follow them until duly repealed, and no departure from them, except in some case of necessity, is permitted.²

§ 422. ¹ That the Patent Office has power to make its own rules, and if these are consistent with the statutes, they are as binding as an act of Congress, see *United States v. Marble* (1882), 22 O. G. 1365.

That the rules of the Office as to the forms of papers, etc., must be complied with, see *Ex parte Mason* (1888), 43 O. G. 627.

That the Executive Department will not interfere with the regulations of the Patent Office, see *Opinion Atty. Gen.* (1869), 13 Op. At. Gen. 28.

That if inconsistent with the stat-

ute, the rule yields and the statute prevails, see *Stone v. Greaves* (1879), 17 O. G. 260.

² That the rules are binding until repealed, see *Smith v. Cowles* (1885), 30 O. G. 343; *Ex parte Smoot* (1877), 11 O. G. 1010.

That the rules are binding on the officers of the department as well as on the public, see *Brown v. La Dow* (1880), 18 O. G. 1049; *Ex parte Smoot* (1877), 11 O. G. 1010.

That the rules must not be departed from without necessity, see *Ex parte Skinner* (1881), 19 O. G. 662.

Changes in these regulations can be made at any time by the same authority which originally enacted them; and after such a change the new rule is to be obeyed even in pending cases, unless injustice will thereby be done to the contestants.³ In the absence both of a statute and a rule of the department, the Patent Office is governed by the principles which the courts apply to cases of a similar character.⁴

§ 423. Grant of Letters-Patent Illegal unless Statutory Prerequisites Fulfilled.

According to the acts of Congress and the rules of the Patent Office, certain preliminary steps on the part of the inventor are made essential to the granting of a patent. The bestowal of the patent privilege depends entirely upon the provisions of the statutes, and the conditions named therein must be fulfilled or the letters-patent will be null and void.¹ With these prerequisites the Patent Office has no power to dispense, though of their existence and sufficiency the Commissioner is in many cases the final judge; and that they did exist and were sufficient the issue of the letters-patent is always *prima facie* evidence.²

³ That there is no excuse for an officer who adheres to a practice after it has been overruled on appeal, see *Ex parte* Kitson (1881), 20 O. G. 1750.

That where new rules do not injure parties in pending cases they will be followed, see *Fowler v. Benton* (1880), 17 O. G. 266.

That the decisions of courts operate on all cases alike from the time they are rendered, while the rules of practice apply only to cases filed after their adoption, if they would prejudice the parties, see *Ex parte* Pfaudler (1882), 23 O. G. 269.

⁴ That where the same questions arise in the Patent Office as in the courts, they are governed by the same rules, see *Dana v. Greenleaf* (1875), 9 O. G. 198.

That the same rules as to the evidence establishing the fact of invention

are followed in the Patent Office and the courts, see *Chambers v. Duncan* (1876), 10 O. G. 787.

§ 423. ¹ That the right to letters-patent rests on the statutes, and the conditions authorizing their issue must be strictly fulfilled, see *Ex parte* Benton (1882), 23 O. G. 341; *Moffitt v. Gaar* (1860), 1 Bond, 315; 1 Fisher, 610; *Latta v. Shawk* (1859), 1 Bond, 259; 1 Fisher, 465.

² That the Patent Office cannot dispense with the legal prerequisites to a patent, see *Eagleton Mfg. Co. v. West, Bradley, & Cary Mfg. Co.* (1883), 111 U. S. 490.

That the patent is *prima facie* evidence that all prerequisites existed, see *Dorsey Harvester Rake Co. v. Marsh* (1873), 6 Fisher, 387.

That as to some prerequisites the decision of the Patent Office is final,

§ 424. Authority of the Commissioner, Acting Commissioner, and Examiners.

The principal officers of the government concerned in the granting of letters-patent are the Commissioner of Patents, the Acting Commissioner, and the various grades of examiners. As the Patent Office is a branch of the Department of the Interior, its general operations are under the supervision of the Secretary of that department, and he may require the Commissioner to perform the functions imposed upon him by the law.¹ The Commissioner is, however, practically at the head of the Patent Office. His powers are partly judicial, partly ministerial. As a judicial officer, he sits as a court of appeal in certain classes of contested cases.²

see *Hoe v. Cottrell* (1880), 1 Fed. Rep. 597.

See also §§ 451, 967, 1016, 1032, and notes, *post*.

§ 424. ¹ That the Commissioner acts under the supervision of the Secretary of the Interior, and may be required by him to perform his official duties, see *Dec. Sec. Int.* (1877), 12 O. G. 475.

That the duties of the Commissioner are of two classes: (1) those imposed on him by law; and (2) those imposed by rule of the department, see *Houston v. Barker* (1888), 44 O. G. 697.

That the Commissioner is subject to the control of the Secretary of the Interior only where he is not controlled by the statutes, see *U. S. v. Butterworth* (1884), 3 Mackay, 229; 27 O. G. 519.

That no appeal lies from the judicial acts of the Commissioner to the Secretary of the Interior, see *Houston v. Barker* (1888), 44 O. G. 697; *Butterworth v. Hoe* (1884), 112 U. S. 50; 29 O. G. 615; *U. S. v. Butterworth* (1884), 3 Mackay, 229; 27 O. G. 519.

That the Secretary has no appellate jurisdiction over the Commissioner as to the quasi-judicial duties imposed on him by law, and though he has authority to direct him to perform his duties, he cannot control the mode of their

performance unless they are merely ministerial, see *Houston v. Barker* (1888), 44 O. G. 697.

That the appellate jurisdiction of the Secretary is limited to cases arising under the rules prescribed by him for the government of his department, see *Houston v. Barker* (1888), 44 O. G. 697.

That where the Commissioner acquiesces in the decision of the Secretary he cannot treat it as a nullity when the Supreme Court afterwards decides that the Secretary had no power to act, see *Drawbaugh v. Blake* (1885), 30 O. G. 259.

That the Secretary will not interfere where the Commissioner has made every endeavor to be correct, unless there has been fraud or palpable error, see *Dec. Sec. Int.* (1883), 23 O. G. 629.

² That the Commissioner acts judicially in granting or refusing a patent, but is nevertheless bound by established rules and principles, see *Butterworth v. Hoe* (1884), 112 U. S. 50; 29 O. G. 615.

That the judicial powers of the Commissioner are chiefly as a court of appeal, see *Stone v. Greaves* (1880), 17 O. G. 397.

That the Commissioner is not to follow the decisions of lower tribunals

As a ministerial officer, he has jurisdiction over the whole matter of the examination of applications and the grant and issue of patents, but in the discharge of these ministerial duties he is subject to the statutes and the rules of the Office; and his powers cannot be extended beyond these, either by his own authority or by the construction of the courts.³ The Acting Commissioner is, for all legal purposes, the Commissioner himself; his jurisdiction cannot be collaterally attacked, and patents certified and allowed by him are of the same validity as those issued by the Commissioner in person.⁴ The examiners, with the exception of the Examiners-in-Chief, are appointed by the Commissioner, and are charged with various duties, especially those of correcting errors in the descriptions of alleged inventions contained in applications for letters-patent, of examining the novelty and utility of such inventions, and of hearing and deciding upon the claims of rival inventors. The functions of the other officers of this department are mainly clerical, and require no particular enumeration.⁵

if he thinks them erroneous, see *Sellers v. Walter* (1886), 37 O. G. 1001.

³ That the Patent Office in granting patents before 1836 acted ministerially rather than judicially: see *Opinion Atty. Gen.* (1831), 2 Op. At. Gen. 454.

That the ministerial jurisdiction of the Commissioner extends to the whole matter of examining applications and granting patents, see *Stone v. Greaves* (1880), 17 O. G. 397.

That the ministerial powers of the Commissioner cannot be extended by the courts, see *Child v. Adams* (1854), 1 Fisher, 189; 3 Wall. Jr. 20.

⁴ That the Acting Commissioner is, for all legal purposes, the Commissioner, see *Dorsey Harvester Rake Co. v. Marsh* (1873), 6 Fisher, 387.

That the clerk is Acting Commissioner when the Commissioner is sick or absent, see *Woodworth v. Hall* (1846), 1 W. & M. 339; 2 Robb, 517.

That the jurisdiction of the Acting Commissioner cannot be collaterally

attacked, and that his certificate is good between the parties, see *Woodworth v. Hall* (1846), 1 W. & M. 248; 2 Robb, 495.

⁵ That the duties of examiners are fixed by the Commissioner, see *Hull v. Com.* (1875), 7 O. G. 559; 2 MacArthur, 90.

See also § 51 and notes, *ante*.

For a discussion of the powers of the Board of Examiners, see *Ex parte Hull* (1875), 9 O. G. 1.

That an examiner cannot pass on any matter expressly decided by a superior tribunal, see *Ex parte Reynolds* (1883), 24 O. G. 993.

That the jurisdiction of an examiner does not change with the person of the incumbent, but remains unaffected until the case passes to a different tribunal or is ended, see *Ex parte Fredericks* (1887), 40 O. G. 691.

That the proceedings in the Patent Office are always presumed to be regular, see *Eagleton Mfg. Co. v. West*,

§ 425. Patent Solicitors and Attorneys.

The business between inventors and the Patent Office is usually transacted through attorneys. An inventor has the right to prepare his own application, and to appear and prosecute his claims in person; but in most cases by doing this he necessarily encounters great difficulties, arising partly from his ignorance of the requirements of the law, and partly from his inability to comply with them if they were known. A due regard for their own interests has led inventors to intrust such affairs to men trained for that purpose, and the practice has been encouraged by the Patent Office as tending to facilitate its own labors, as well as to render more secure the rights of patentees. All such attorneys act under the supervision of the Commissioner, and are subject to a withdrawal of their privileges for misconduct toward the Office or their clients. Their obligations to their employers and their authority and methods of transacting business are governed partly by the regulations of the Office, and partly by the ordinary rules of law.¹

§ 426. Applications: Caveats: Interferences.

The object of an inventor in endeavoring to procure a patent is twofold: (1) To secure for himself the grant of an exclusive privilege; (2) To prevent a similar grant to any rival applicant. To accomplish the first object he must file in the Patent Office an application in which he describes and claims a patentable invention resulting from his own creative act, and must support his application by an oath that he believes himself the first and true inventor of the art or instrument therein described. If the allegations of this application are, upon the customary examination in the Patent Office, found correct, his petition for a patent is formally allowed and in due course of proceedings the letters-patent will be issued, creating in him the desired monopoly.¹ The latter object, though a secondary one, is still of great import-

Bradley, & Cary Mfg. Co. (1880), 17
O. G. 1504; 18 Blatch. 218; 2 Fed.
Rep. 774.

§ 425. ¹ See §§ 431-437 and notes,
post.

§ 426. ¹ See §§ 449-585 and notes,
post.

anco. As every patent is *prima facie* valid, it clothes the patentee with a presumptive right to the exclusive use of the invention, and although issued to another than the real inventor, and therefore liable to be avoided by the courts, while it exists it constitutes a cloud upon the title of the true inventor, rendering his own letters-patent of doubtful validity even where it forms no obstacle to his procuring them. Methods have consequently been provided for the attainment of this as well as the first object. An inventor who is engaged in developing his conceptions or reducing them to practice, and is not yet prepared to make a formal application for a patent, may protect himself against the issue of a patent to his rival by filing in the Patent Office a notice called a *Caveat*, and maintaining it on file until his invention is completed and his own application is prepared.² Where his rival first appears after his own application has been presented to the Office, he can secure the adjustment of their conflicting claims, and, if he be the true and first inventor, the issue of the patent to himself and its refusal to his rival, by a proceeding known as an *Interference*.³ These three proceedings constitute the principal business of the Office in relation to the grant of patents.

§ 427. Patent Office Practice and Procedure.

In the conduct of these proceedings the Patent Office is guided not only by the acts of Congress and the written rules of the Office, but by its own established practice. In this tribunal, as in every other, statutes and rules receive a practical interpretation by their application to particular states of fact, and methods of procedure are extended or defined by usages subordinate to, but still beyond, the provisions of the written law. With the facility for reducing all such usages to formal rules which is afforded by the powers of the Commissioner, there is, however, less room for these judicial and traditionary regulations in the Patent Office than in most other bodies where conflicting claims are decided.

² See §§ 438-448 and notes, *post*.

³ See §§ 586-616 and notes, *post*.

§ 428. Patent Privilege Created at the Date of the Issue of the Letters-Patent: Mode and Conditions of Issue.

The final action of the Patent Office in the granting of a patent is the issue of the letters-patent to the inventor. Then, and then alone, does his title to the patent privilege become complete.¹ Neither the application, nor the admission of the novelty and utility of his invention by the examiners, nor the decision in his favor of any contest with rival claimants, establishes his rights as against the public. This can be done only by the actual issue of the letters-patent. The mode in which this issue shall take place, the form and contents of the instrument itself, the term which it shall specify as the duration of the monopoly, and the acts to be performed by the inventor on receiving notice of the grant, are all specifically prescribed by law.²

§ 429. Letters-Patent Grantable by Special Act of Congress.

In certain cases letters-patent may be granted without the intervention of the Patent Office. Instances arise where the merits of an inventor justly entitle him to the privileges of a patentee, although from peculiar circumstances his case is not within the jurisdiction conferred upon the Patent Office by the statutes. In such instances an application may be made directly to Congress itself, whose general powers under the Constitution enable it to secure to the inventor the exclusive use of his invention, in any manner and for any time which it may deem expedient. Patents thus granted fall under the general provisions of the law, except when otherwise specified in the act conferring them.¹

§ 428. ¹ That no legal title to the patent exists until the patent issues, see *Pontiac Knit Boot Co. v. Merino Shoe Co.* (1887), 31 Fed. Rep. 286.

² See §§ 617-632 and notes, *post*.

§ 429. ¹ The power of the Federal legislature, under the Constitution, to grant a monopoly to an inventor by special act has been repeatedly affirmed by the courts, and frequently exercised by Congress itself. The fact that the invention has already gone into ex-

tensive public use, or that a long period has elapsed since it was ready for bestowal on the public, or that an application to the Patent Office for a patent has been refused, may furnish a reason why Congress should decline to show this favor to the inventor, but in no wise restricts its authority to do so, should the measure seem expedient. Existing monopolies cannot in this manner be abrogated or curtailed; but with this limitation the action of Con-

§ 430. Grant of Letters-Patent: Subordinate Topics: Order of Discussion.

In considering the various rules relating to the grant of letters-patent, and the many subordinate and collateral topics which the general subject embraces, the following arrangement will be pursued:—

- I. Of Patent Attorneys, their Rights and Duties.
- II. Of Caveats and the Procedure thereon.
- III. Of the Form of the Application.
- IV. Of the Subject-Matter of the Application.
- V. Of the Description of the Invention.
- VI. Of the Claim.
- VII. Of the Drawings and Model.
- VIII. Of the Filing of the Application and Payment of Fees.
- IX. Of Procedure in Uncontested Cases.
- X. Of Procedure in Interference Cases.
- XI. Of the Form and Effect of Letters-Patent.

SECTION I.

OF ATTORNEYS.

§ 431. Relation of Patent Attorneys to the Patent Office.

An inventor may choose any person of intelligence and good moral character to act as his attorney in the prosecution of his application for a patent.¹ Over all such attorneys the Commissioner of Patents has a certain authority and he may pass upon their appointments and dismissals;² but the Patent Office is not responsible for their conduct toward their clients,

gress may be retrospective or prospective only, and may bestow on the monopoly such characteristics of duration and extent as the wisdom of the legislature may determine. See further on this subject §§46, 47, and notes, *ante*.

§ 431. ¹ That patent attorneys are not required to be learned lawyers, see *Osgood v. Badger* (1888), 44 O. G. 1065.

That no qualifications of age, sex,

or capacity are requisite to patent attorneys, see *Hoosier Drill Co. v. Ingels* (1879), 15 O. G. 1013.

² That the Commissioner may pass on powers and revocations of attorneys, see *Ex parte Morley* (1886), 37 O. G. 337; *Ex parte Pitney* (1880), 17 O. G. 447.

That patent attorneys are not agents of the Patent Office, see *Hoosier Drill Co. v. Ingels* (1879), 15 O. G. 1013.

nor will it aid inventors in selecting them. Nor are special privileges permitted by the Office to any one attorney over another; nor has one any more facilities for procuring patents than another, except such as arise out of his own superior diligence and skill.

§ 432. Patent Attorneys Appointed only by a Written Power.

An inventor can appoint an attorney only by a written power of attorney, and the Patent Office cannot recognize the attorney as such until the power of attorney has been duly filed in the department. This written power must be signed by the inventor or other proper applicant, and must name each and every person upon whom the attorneyship is to be conferred. A power of attorney given to a firm must thus specifically mention each member of the firm or it cannot be regarded as bestowing the required authority either upon the firm as a whole or upon any of the copartners. Any power of attorney may contain a written authorization, by virtue of which the original attorney may substitute another for himself, or may associate another with him; but such authorization will not empower the substitute or associate to delegate his authority to others.¹ The rules requiring and governing the power of attorney are stringent and universal, not even a member of Congress being allowed to examine patent cases, nor act in them, without first filing such written power.

§ 433. Authority of Attorney Revocable or Irrevocable: How Revoked.

A power of attorney may be either irrevocable or revocable. Where it constitutes part of a contract, in the fulfilment of which the attorney has a beneficial interest, it is irrevocable; although even in such cases the attorney is still, so far as the

§ 432. ¹ That an associate attorney cannot be appointed by the applicant without the consent of the regular attorney, see *Ex parte Ranks* (1887), 38 O. G. 329.

That an associate attorney should be appointed by the regular attorney upon the written authority of his client,

see *Ex parte Ranks* (1887), 38 O. G. 329.

That where an applicant appoints two or more attorneys he must designate with which the Office shall hold correspondence, otherwise it will recognize only the resident attorney, see *Ex parte Jewett* (1887), 38 O. G. 781.

application for a patent is concerned, the mere agent of his principal.¹ Unless the authority is thus irrevocable, it may be terminated by the client at his pleasure. In order to do this, he should give written notice of such revocation to the Patent Office; whereupon the Office will immediately notify the attorney, and thenceforth deal personally with the client, or with such other attorney as he may lawfully appoint. This notice puts an end to the authority of the attorney; and neither the Patent Office nor any contesting party to whom the notice of the revocation may be given is at liberty thereafter to recognize him as representing his former principal.² The death of the principal also terminates a revocable power of attorney; and where an applicant dies pending his application, his personal representatives must re-appoint the attorney, or ratify his former appointment, before he can be allowed to act for them.³ But the assignment, by an applicant, of an undivided interest in the invention will not revoke a previous power of attorney nor authorize the assignee to revoke it; though where a power of attorney is conferred before the application, and subsequently, but still before the application, the entire interest in the invention is assigned, the authority of the attorney of the assignor expires, and a new appoint-

§ 433. ¹ That when a power of attorney is part of a contract which creates a beneficial interest in the attorney, it is irrevocable, see *Ex parte Harrison* (1878), 13 O. G. 547.

That an attorney holding an irrevocable power is still the mere agent of his principal, see *Ex parte Cox* (1872), 2 O. G. 491.

That a power of attorney not coupled with an interest is revocable at will, see *Ex parte Morley* (1886), 37 O. G. 337.

² That an applicant can discharge his attorney on giving notice to the Patent Office without leave of the Commissioner, see *Hoosier Drill Co. v. Ingels* (1879), 15 O. G. 1013.

That notice to the Patent Office of revocation terminates the authority of the attorney and the right of the Office to deal with him as such, see *Ex parte*

Morley (1886), 37 O. G. 337; *Hoosier Drill Co. v. Ingels* (1879), 15 O. G. 1013.

That notice to the adverse parties of such revocation deprives them of the right to recognize him as attorney, see *Hoosier Drill Co. v. Ingels* (1879), 15 O. G. 1013.

³ That the death of an applicant revokes his power of attorney, see *Eagleton Mfg. Co. v. West, Bradley, & Cary Mfg. Co.* (1880), 18 Blatch. 218; 2 Fed. Rep. 774; 17 O. G. 1504.

That the former attorney of a deceased applicant has no power to amend the application after his death without the oath of the representative, see *Eagleton Mfg. Co. v. West, Bradley, & Cary Mfg. Co.* (1880), 18 Blatch. 218; 2 Fed. Rep. 774; 17 O. G. 1504. Affirmed s. c. (1883) 111 U. S. 490.

ment, or the ratification of the previous one, by the assignee is necessary.⁴

§ 434. Authority of Attorney Limited to the Application Accompanying the Power.

The relation created between the inventor and his attorney by the filing of the written power of attorney is neither permanent nor universal, but has reference only to the particular proceedings of which the power of attorney forms a part, and ends when that proceeding is concluded.¹ If several applications are instituted concurrently by the same inventor, a separate power of attorney must be filed in each, although in all the person of the attorney may be the same. For purposes of notice in certain cases, however, the Patent Office continues to recognize an attorney as a medium of communication with his client after the business for which he was appointed is completed.

§ 435. Authorized Attorney the Sole Medium of Communication between Patent Office and Inventor: his Rights and Duties.

After the filing of the written power of attorney in the Patent Office, all its correspondence with the inventor takes place through his attorney. The attorney has a right to inspect the papers in his case while in the custody of the Office, and is allowed to consult with the examiners and their assistants in regard to questions which arise concerning it in their departments. In all his dealings with the Patent Office he is required to conduct himself with courtesy and decorum; and written applications, arguments or other documents, containing anything in violation of this requirement, will ordinarily be returned to him without action. In his dealings with his client he is subject to the general rules of

⁴ That when an entire invention is assigned before application, and the attorney has received his power from the inventor alone, the power must be ratified by the assignee or a new attorney appointed, see *Ex parte Ackerman* (1880), 17 O. G. 1036.

§ 434. ¹ That the authority of an attorney is not continuous, but ends when the application ends, see *Hoosier Drill Co. v. Ingels* (1879), 15 O. G. 1013.

agency, and is obliged to use such skill and diligence as the nature of the business he has undertaken may demand.¹ But neither his culpable neglect nor his fraudulent conduct are allowed to prejudice his principal, unless they have been instigated or accepted by the principal himself, or unless vested rights or public interests would be unjustly violated were the acts of the attorney held invalid.²

§ 436. Compensation of Patent Attorneys: Lien on Letters-Patent.

The attorney of an inventor, like any other attorney, has a lien upon the papers of his client for his fees.¹ The letters-patent, when issued by the Office, are delivered to him if he so desires, and may be retained by him until his reasonable charges against the patentee for services and disbursements have been paid. The same privilege belongs to an associate or substitute attorney in reference to all papers properly coming into his possession, although the patent itself is not delivered to him by the Office without a special order from the primary attorney.

§ 437. Attorneys Disbarred by Commissioner for Cause.

The power of the Commissioner over the attorneys of inventors extends to their suspension or dismissal for gross misconduct, either toward the Patent Office or their clients. This power is conferred on the Commissioner by statute, and

§ 435. ¹ That a party is bound by the acts of his attorney, acting in good faith and within the scope of his authority, see *Ex parte Hatchman* (1884), 3 Mackay, 288; 26 O. G. 738; *Ex parte Hatchman* (1883), 25 O. G. 979.

² That delays fraudulently caused by his attorney do not prejudice the inventor, see *Case v. Hastings* (1875), 7 O. G. 557.

For some purposes the acts of the attorney bind his principal, even though involving a breach of duty or a want of professional skill. Where the interests of rival claimants are to be affected by a disavowal of the measures adopted

by the attorney, or where the public have availed themselves of the apparent abandonment of rights which greater vigilance or knowledge on the part of his attorney might have secured to the inventor, the principal is bound by the acts of his agent and must seek his remedy for the ignorance or neglect in the usual mode. Examples of the application of this rule will be observed in many cases hereafter cited, especially in reference to the subject of Re-issues.

§ 436. ¹ That an attorney, or a substitute attorney, has a lien on the papers of his client, see *Ex parte Bowers* (1879), 16 O. G. 1004.

its necessity is manifested by the frequency of the occasions which demand its exercise. The suspension or dismissal may be general, covering all present and future proceedings in which the attorney is or might be employed, or it may be particular, merely preventing him from acting in the special cases named. This power, however, is not arbitrary nor conclusive. A hearing upon formal charges, in pursuance of the usual judicial methods, is accorded to the attorney; and the order for his dismissal, with the reasons for it, must be submitted to and receive the approval of the Secretary of the Interior before it goes into effect.

SECTION II.

OF CAVEATS.

§ 438. Purpose of Caveat.

The purpose of a caveat is to secure to an inventor the opportunity to have the question of priority between himself and a rival inventor determined before the issue of letters-patent to either.¹ In the absence of such an opportunity the first applicant for a patent would receive the grant, although as a matter of fact he was not the earliest inventor. If subsequently to the issue of his patent the earlier inventor made his application, and successfully maintained his claim of priority, he would become entitled to, and would obtain, a patent also. Thus two outstanding patents for the same invention would exist, each vesting the exclusive right in a different patentee, — a condition of affairs endangering the value of the invention not only to the rival patentees but to the public, since the use of the invention under either patent is a *prima facie* infringement of the other. To prevent this difficulty as far as possible Congress in 1836 provided the present method of securing to inventors who may not be ready to present their own applications such timely notice of the pendency of

§ 438. ¹ That the object of a caveat (1859), 18 How. Pr. 7; 4 Blatch 362; is to protect the first conceiver, and 1 Fisher, 479; *Allen v. Hunter* (1855), secure him a proper notice of subsequent applications, see *Phelps v. Brown* 6 McLean, 308.

other applications covering the same invention as will enable them to make their claims and have them investigated by the Patent Office before any one receives the patent.

§ 439. Nature and Effect of Caveat.

A caveat is a written notice to the Patent Office that the caveator claims to be the first and true inventor of the art or instrument therein described. Its effect is to prevent the grant of a patent for the same alleged invention, without notice to the caveator, in case an application should be filed by another inventor during the life of the caveat. Thus it simply entitles the caveator to a certain notice. It does not afford him any protection against public use, nor supply the place of due diligence in perfecting his invention and reducing it to practice.¹ It gives him no advantage over any rival claimant, who may subsequently file a caveat or an application for a patent; nor does it impose upon him any obligation, either to present an application on his own behalf, or to oppose the issue of the patent to his rival.

§ 440. Who may File a Caveat.

No person is permitted to enjoy this privilege unless he is a citizen of the United States, or, if an alien, unless he has resided in this country for one year next preceding the filing of his caveat, and has formally declared his intention to become a citizen. He must also be the actual inventor of the art or instrument described in his caveat, and must believe himself to be its first inventor; and for reasons known to himself, but into which neither the Patent Office nor the law inquires, he must desire further time to mature his invention before filing his own application for a patent.¹

§ 439. ¹ In *Bell v. Daniels* (1858), 1 Bond, 212, Leavitt, J.: (218) "The effect of the caveat is to protect the claim of an inventor from all interfering applications made within one year after its filing, by requiring the Office to notify him of such applications, that he may resist the interference if he chooses. But if, during the time which elapses

between the filing of his caveat and his application he allows his invention to go into public use, his caveat will not protect him." 1 Fisher, 372 (377).

§ 440. ¹ That a caveat cannot be filed for a design as a design cannot exist at all until it is complete enough to be patented, see *Ex parte Carty* (1888), 44 O. G. 570.

§ 441. Contents of Caveat.

The caveat itself consists of a petition on oath, a specification, and in some cases a drawing. The petition alleges the citizenship or resident alienage of the caveator, his inventive act, and his desire to perfect his invention before applying for a patent, and prays that his accompanying specification may be placed on file in the Patent Office. The oath affirms the allegations of citizenship or residence, and the belief of the caveator that he is the first inventor. The specification embraces a description of the object of invention, and of its distinguishing characteristics. In this description the same particularity is not required as in that annexed to a petition for a patent; but it must be as complete and exact as the inventor is able to give, and must be precise enough to enable the examiners in the Office to determine whether an invention described in a subsequent application is probably the same. Any defect in this respect must be amended before the caveat can be accepted by the Office. The specification must also be limited to one invention, according to the rules established for the application for a patent; and if amendments offered describe a different or an additional invention they cannot be received, except as new and separate caveats. When practicable, a full and accurate drawing of the invention, executed upon some substance capable of being folded for convenient filing, should accompany the specification. The caveat must be signed by the inventor, although in caveats for joint inventions the signature of one inventor only is sufficient.¹ The established fee must also be forwarded with the caveat. A failure to comply with any of these requirements renders the caveat of no validity, and the caveator is not entitled to the notice which it is intended to secure.

§ 442. Filing of Caveat: its Secrecy.

On the receipt of the caveat by the Patent Office, in proper form, it is filed in the secret archives of the Office and there

¹ That a caveat for a joint invention may be signed by one of the inventors only, see *Ex parte Gray* (1877), 12 O. G. 396.

That a caveat and oath by one in-

ventor is no bar to an application by him and another as joint inventors if the mistake were *bona fide*, see *Hoe v. Kahler* (1882), 12 Fed. Rep. 111; 20 Blatch. 430.

remains during its life, inaccessible to all persons except the inventor, or his duly authorized agent, and the officers of the department. No information is permitted to be given to any others, either concerning its contents or the fact of its existence, unless by the direction of the caveator.¹

§ 443. Duration of Caveat.

A caveat, once filed, remains in force for one year from the date of its acceptance by the Patent Office. At the expiration of this term it may be renewed for another year by the payment of an additional fee; and so on from year to year during the pleasure of the caveator. If not renewed it still remains in the secret archives of the Office, although it ceases to secure any rights to the inventor.

§ 444. Notice of Subsequent Applications to Caveator: Proceedings Thereon.

Whenever an application for a patent for the same invention is filed by a rival inventor, either simultaneously with the caveat or during its life, and the invention described is found by the Office to be patentable and to correspond apparently with that specified in the caveat, proceedings on the application are suspended, the application with its specification, drawings, and model is deposited within the secret archives of the Office, and the caveator is notified to file his application for a patent in order that the rival claims may be determined. The caveator must thereupon present his application within three months from the expiration of the time regularly required for the transmission of such notice to him by mail from Washington; and if it then appears that the two applications claim the same invention an interference will be declared and the controversy heard and decided in the mode provided for that purpose.¹ This notice to the caveator

§ 442. ¹ That the rule requiring caveats to be kept secret is lawful, see Dec. Sec. Int. (1883), 23 O. G. 629.

That the fraudulent disclosure of a caveat to a rival applicant does not bar the right of the latter to a patent for the invention described and claimed in an application filed before the disclosure

was made, see *American Bell Telephone Co. v. National Improved Telephone Co.* (1886), 27 Fed. Rep. 663.

§ 444. ¹ In *American Nicholson Pavement Co. v. Elizabeth* (1873), 3 O. G. 522, Nixon, J. : (525) "The 12th section of the act of July 4, 1836, under which the foregoing caveat was filed,

it is the duty of the Commissioner to give; and if, through any fault or inadvertence in the Office, it should be omitted, or if the caveator should fail to receive it, and a patent for the invention issue to the applicant, the latter can take no advantage from his patent in any subsequent interference proceeding between himself and the caveator.² Although his

authorizes any person who shall have invented any new art, machine, or improvement thereof, and shall desire further time to mature the same, upon payment of twenty dollars, to 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. Such caveat is filed in the confidential archives of the Office and preserved in secrecy. The obvious design of this section is to afford to inventors the opportunity of perfecting their discoveries and inventions. To prevent an abuse of the privilege, it is further provided that if an application is made by any other person, within one year from the time of filing the 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 descriptions, 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 benefits of his caveat, file his description, specifications, drawings, and model. If no such application is made, the caveator has a reasonable time in which to mature his invention or discovery; and when his letters-patent are issued, if he have used due diligence, he has the right to have his matured invention incorporated into his patent, and to supersede those that have intervened between the date of his first discovery and his subsequent

taking out of the patent." 6 Fisher, 424 (431).

² In *Frevert v. Gahr* (1873), 3 O. G. 660, Thacher, Act. Com. : (660) "The law, however, not only contemplates that notice shall be duly sent, but that it shall be received by the caveator; that he shall have no benefit of his caveat for which he has paid, which he cannot have if he does not receive notice of an interfering application. I do not mean to assert that the Office is bound to insure him notice, further than it does in ordinary cases, by duly mailing the notice and suspending the interfering application, as was done in this instance. But when it appears in proof as a matter of fact that the notice, through no fault of his, did not reach the caveator, then it follows that the patentee has obtained his patent without the proceedings in interference which the law contemplates shall be had in all cases of this nature. Whereas, if the notice had not failed to reach its destination, the parties would, in all probability, have come before the Office as applicants upon equal footing, as the law intends in such cases; now, by the fault of neither party nor the Office, the patentee, as such, has, upon the record, acquired an advantage. It cannot be ignored that his apparent advantage in this instance comes through a mere accident, and that if allowed its ordinary value the spirit of the law would obviously be subverted. Therefore I am not disposed to consider Gahr in any better position than he would have been had the interference been declared pending his application."

That it is the duty of the Commis-

patent cannot be recalled it will be regarded as surreptitiously obtained, and both the caveator and himself will be treated as standing on equal ground as rival applicants.³ But this rule in reference to notice applies exclusively to applications filed pending the caveat; of those which are already in the Office when the caveat is filed, and those which are presented after the life of the caveat expires, the caveator has no right to be informed, but must take the same chances concerning them as any other inventor.⁴

§ 445. **Caveat not to be Withdrawn: Copies: Amendments.**

A caveat, having been once filed in the Office, cannot be withdrawn by the caveator, either for the purpose of amendment or for any other purpose. Copies of it, or of its accompanying papers, may be obtained by him or his authorized agent in the usual manner; and any correction or addition which he may desire to make, if proper to be made at all, must be separately prepared and filed.

§ 446. **Caveat as Evidence: as Estoppel.**

A caveat is evidence of the date of the invention described therein, and may be used in certain cases as proof that the inventive act had been performed before the time when it was filed.¹ But unless necessarily inferred from the description given, it does not show that the invention was then completed; nor, on the other hand, does the statement in it that the caveator desires further time to mature his invention

sioner to give to the caveator the proper notice, and its accidental omission cannot prejudice his rights, see *Phelps v. Brown* (1859), 4 Blatch. 362; 18 How. Pr. 7; 1 Fisher, 479.

³ That a patent issuing on a subsequent application, without notice to the caveator, gives no advantage to the patentee, but as against the caveator he will still be treated as a rival applicant, see *Ware v. Bullock* (1874), 7 O. G. 39; *Phelps v. Brown* (1859), 4 Blatch. 362; 18 How. Pr. 7; 1 Fisher, 479.

That a patent issued on a subsequent application without notice to the caveator is "surreptitiously obtained," see *Phelps v. Brown* (1859), 4 Blatch. 362; 18 How. Pr. 7; 1 Fisher, 479.

⁴ That an application and a caveat being filed simultaneously by two different inventors, the caveator is entitled to notice, see *Ex parte Essex* (1876), 9 O. G. 497.

§ 446. ¹ See MS. cases cited in *Law's Digest*: title, *Caveat*. Also § 1015 and notes, *post*.

conclude him from averring that the art or instrument was at that time perfect and ready for a patent.²

§ 447. **Caveat not Assignable.**

The law makes no provision for the assignment of a caveat, or of the right to notice which it is intended to secure. The invention described therein may be transferred under such terms of contract as shall protect the assignee by obliging the inventor to proceed with his application, upon receiving notice, on behalf of the real owner of the invention; and the caveat may serve as a means for identifying the invention applied for with the invention so transferred.

§ 448. **Caveator not Concluded by his Description of the Invention.**

The description of the invention as given in a caveat is not conclusive upon the inventor or his assignee. It does not purport to be an account of a result accomplished, but of a result expected and desired; and, when attained, this result may vary in many particulars from the one foreseen by the inventor. While, therefore, as entitling him to a notice of subsequent applications, the caveat is taken according to the terms of the description, he is not estopped by it, when his invention is completed, from connecting with his perfect art or instrument the inventive act imperfectly delineated by him in the caveat. Having filed this as a matter of precaution, he may proceed with his experiments; and if he uses due diligence he may secure his matured invention by a patent, although other inventors have conceived the same ideas or successfully prosecuted the same experiments since the date of his original discovery.¹ In all such cases the question between him and his rivals is simply that of priority of invention, to be determined according to the principles already stated.

² That a caveat does not show whether or not the invention is perfected, see *Johnson v. Root* (1858), 1 Fisher, 351.

§ 448. ¹ That if the first conceiver, having filed his caveat, uses reasonable diligence in reducing to practice, he may protect his matured invention in his patent, see *American Nicholson Pavement Co. v. Elizabeth* (1873), 3 O. G. 522; 6 Fisher, 424; *Phelps v. Brown* (1859), 4 Blatch. 362; 18 How. Pr. 7; 1 Fisher, 479.

SECTION III.

OF THE APPLICATION : ITS FORM.

§ 449. Application for Letters-Patent Made by Whom.

An application for a patent must in all cases be made by the inventor, if living, whoever may by law be actually entitled to the ownership of the exclusive privilege when granted. A patent may be issued, as shown at length in the preceding Book, either to the inventor himself, his personal representatives, or his assigns; but the measures to obtain it must be originated by the inventor, unless this has been rendered impossible by his death. If he has died after completing the invention and without applying for a patent, the application must be made by his executor or administrator in the interest of his heirs or devisees or assignees, in whom, by law or by the act of the inventor, the right to the patent may be vested. An application for a patent for a joint invention must be made by all the joint inventors.

§ 450. Proper Applicant Determined from the Record Title in the Patent Office.

In receiving and examining applications the Patent Office deals only with those who appear, by the records of the Office, to be the proper applicants.¹ It has no jurisdiction over questions of title between rival claimants, and cannot undertake to make or alter or enforce the agreements of contending parties. It therefore recognizes the inventor as the only

§ 450. ¹ In *Ex parte* Edison (1875), 7 O. G. 423, Thacher, Com. : (424) "The issue before the Commissioner is, to whom shall the patents be granted? In determining this question, the Commissioner must be guided entirely by the record. He has not the authority of a court to consider evidence, outside the record, as to outstanding equities. The only question that he can decide is, who on the record possesses the *legal* title to these inventions? He must

issue the patents accordingly, if the requirements of the Office in such cases provided have been complied with."

That an application is evidence of the applicant's title, see Com. Dec. (1884), 26 O. G. 637.

That in issuing patents the Patent Office has no power to reform or cancel assignments or decide the equitable rights of parties on extraneous proof, but must follow the record title, see *Ex parte* Paine (1878), 13 O. G. 408.

party in interest, until by proof of his death and the presentation of the proper letters by his personal representative, the latter is substituted in his place, or until, by the filing and recording of an assignment, the assignee is made either the sole owner of the invention, or a joint owner with the inventor. Thus, although the application be originally made by the inventor, the person of the applicant, as known to the Patent Office, may be subsequently changed, either wholly or in part. By the death of the inventor, or by his assignment of the entire interest in the invention or in the future patent, he ceases to be known to the Office as an applicant, and his executor or administrator or the assignee is alone entitled to hold correspondence with the department concerning the invention; while if the assignment has transferred only an undivided interest in the invention or the patent, both the inventor and the assignee now constitute the applicant, and both are so regarded by the Office and must act jointly in the prosecution of their claims. Changes of this character may take place up to the date of the issue of the patent, and the patent will then be granted to whosoever may appear of record to be its proper owner.²

§ 451. Applications must Conform to Legal Requirements: if Granted, such Conformity Presumed.

Every application for a patent must conform in all respects to the requirements of the law.¹ The Patent Office has no power to dispense with any of them, however unessential they may seem to be.² Its own authority, as well as the rights of

² That an assignment filed of record after the final fee is paid will be considered in the Patent Office, see *Ex parte Paine* (1878), 13 O. G. 408.

That assignees of two joint inventors become thereby the owners of a sole patent afterward granted to one of the joint inventors and may control the application, see *Kohler v. Kohler* (1888), 43 O. G. 247.

§ 451. ¹ That all essential statutory prerequisites must be fulfilled or the patent will be void, see *Eagleton Mfg. Co. v. West, Bradley, & Cary Mfg. Co.*

(1884), 111 U. S. 490; 27 O. G. 1237; *Eagleton Mfg. Co. v. West, Bradley, & Cary Mfg. Co.* (1880), 18 Blatch. 218; 2 Fed. Rep. 774; 17 O. G. 1504; *Latta v. Shawk* (1859), 1 Fisher, 465; 1 Bond, 259; *Ransom v. Mayor of N. Y.* (1856), 1 Fisher, 252; *Child v. Adams* (1854), 1 Fisher, 189; 3 Wall. Jr. 20.

See also § 423 and notes, *ante*.

² That the Patent Office has no power to dispense with such prerequisites though the courts may have sustained patents not possessing them, see *Eagleton Mfg. Co. v. West, Bradley, &*

applicants, rests upon the provisions of the statutes, and is validly exercised only when such provisions are obeyed.³ But this rule is not pressed to an extreme against the interests of applicants. Where the applicant has in good faith complied with his own obligations under the direction of the Office, no error or neglect on its part can prejudice his rights.⁴ Moreover, from the granting of the patent the courts presume that all formal requirements have been fulfilled, and do not suffer this presumption to be disputed, except in some proceeding directly instituted to repeal the patent.⁵

Cary Mfg. Co. (1883), 111 U. S. 490 ; 27 O. G. 1237 ; *Ex parte* Heginbotham (1875), 8 O. G. 237.

³ In *Moffitt v. Gaar* (1860), 1 Bond, 315, Leavitt, J. : (317) "It is an undoubted truth that an inventor has no legal rights or immunities under a patent, except such as are conferred by the statute. With whatever solemnity or observance of legal form it may have issued, if wanting in any substantial statutory requisite, it is a nullity. And such defect is always available as a defence in a suit for an infringement." 1 Fisher, 610 (612).

That a patent is invalid unless the substantial legal requirements are complied with, though the patentee is innocent of bad intent, see *Ex parte* Benton (1882), 23 O. G. 341.

⁴ In *Commissioner v. Whitely* (1866), 4 Wall. 522, Swayne, J. : (532) "It is averred in the petition, and not denied in the answer, — and therefore, as in other like cases of pleading, to be taken as conceded, — that the application was filed with the acting Commissioner. It is also admitted in the answer that the requisite amount of fees had been paid by the relator, but it is added that it had not been placed to the credit of the Office, and was in the hands of the chief clerk, subject to the relator's order. The relator had done all in his power to make his application effectual, and had a right to consider it properly before the Commissioner."

That errors in the Patent Office, without the fault of the inventor, cannot affect his rights, see *Bignall v. Harvey* (1880), 18 O. G. 1275 ; 4 Fed. Rep. 334 ; 18 Blatch. 353 ; *Sayles v. Chicago & Northwestern R. R. Co.* (1865), 2 Fisher, 523 ; 1 Bissell, 468 ; *Phelps v. Brown* (1859), 1 Fisher, 479 ; 4 Blatch. 362 ; 18 How. Pr. 7 ; *Sparkman v. Higgins* (1846), 1 Blatch. 205.

That delays in the Patent Office, if not attributable to the negligence of the applicant, cannot affect his rights, see *Jones v. Sewall* (1873), 6 Fisher, 343 ; 3 Clifford, 563 ; 3 O. G. 630 ; *Johnsen v. Fassman* (1871), 1 Woods, 138 ; 5 Fisher, 471 ; 2 O. G. 94 ; *Dental Vulcanite Co. v. Wetherbee* (1866), 2 Clifford, 555 ; 3 Fisher, 87 ; *Sayles v. Chicago & Northwestern R. R. Co.* (1865), 1 Bissell, 468 ; 2 Fisher, 523 ; *Adams v. Jones* (1859), 1 Fisher, 527 ; *Rich v. Lippincott* (1853), 2 Fisher, 1.

That delays in the Patent Office, if acquiesced in by the applicant, may bar his rights, see *Bevin v. East Hampton Bell Co.* (1871), 5 Fisher, 23 ; 9 Blatch. 50.

⁵ In *Philadelphia & Trenton R. R. Co. v. Stimpson* (1840), 14 Peters, 448, Story, J. : (458) "It is a presumption of law that all public officers, and especially such high functionaries, perform their proper official duties, until the contrary is proved. And where, as in the present case, an act is to be done or patent granted upon evidence and

§ 452. Legal Requisites of Application.

An application for a patent, as well as all communications with the Patent Office concerning it, must be in writing; and if not correctly, legibly, and clearly written the Commissioner may require them to be printed at the cost of the party filing them. The application must be in the English language and be addressed to the Commissioner, and must include a petition, an oath, and a specification or Description and Claim

proofs to be laid before a public officer, upon which he is to decide, the fact that he has done the act or granted the patent is *prima facie* evidence that the proofs have been regularly made, and were satisfactory. No other tribunal is at liberty to re-examine or controvert the sufficiency of such proofs, if laid before him, when the law has made such officer the proper judge of their sufficiency and competency. It is not, then, necessary for the patent to contain any recitals that the prerequisites to the grant of it have been duly complied with, for the law makes the presumption; and if, indeed, it were otherwise, the recitals would not help the case without the auxiliary proof that these prerequisites had been, *de facto*, complied with. This has been the uniform construction, as far as we know, in all our courts of justice upon matters of this sort. Patents for lands, equally with patents for inventions, have been deemed *prima facie* evidence that they were regularly granted, whenever they have been produced under the great seal of the government, — without any recitals or proofs that the prerequisites of the acts under which they have been issued have been duly observed." 2 Robb, 46 (63).

That the decision of the Commissioner on the sufficiency of the applicant's fulfilment of the formal prerequisites to a patent is final, see *Hancock Inspirator Co. v. Jenks* (1884), 21 Fed. Rep. 911; *Hoe v. Cottrell* (1880), 1 Fed. Rep. 597; 18 O. G. 59; 17 Blatch.

546; 5 Bann. & A. 256; *Do Florez v. Reynolds* (1878), 14 Blatch. 505; 3 Bann. & A. 292; *United States Rifle & Cartridge Co. v. Whitney Arms Co.* (1877), 14 Blatch. 94; 11 O. G. 373; 2 Bann. & A. 493; *Tarr v. Folsom* (1874), 5 O. G. 92; *Holmes*, 312; 1 Bann. & A. 24; *McMillin v. Barclay* (1871), 5 Fisher, 189; 4 Brews. (Pa.) 275; *Seymour v. Osborne* (1870), 11 Wall. 516.

That the issue of a patent is *prima facie* evidence that all prerequisites are complied with, see *Konold v. Klein* (1878), 3 Bann. & A. 226; *Gear v. Grosvenor* (1873), 3 O. G. 380; 6 Fisher, 314; *Holmes*, 215; *Dorsey Harvester Rake Co. v. Marsh* (1873), 6 Fisher, 387; *Crompton v. Belknap Mills* (1869), 3 Fisher, 536.

That a patent need not recite that all its prerequisites have been fulfilled, see *Gear v. Grosvenor* (1873), *Holmes*, 215; 6 Fisher, 314; 3 O. G. 380.

That a patent can be attacked on the ground of formal defects in the application or its prerequisites only by a *scire facias*, a bill in equity, or an information to set aside the patent, see *Hoe v. Cottrell* (1880), 18 O. G. 59; 17 Blatch. 546; 1 Fed. Rep. 597; 5 Bann. & A. 256.

That judgments by the Patent Office are *prima facie* only, not conclusive, see *Wilson v. Barnum* (1849), 2 Fisher, 635; 1 Wall. Jr. 347; 2 Robb, 749.

That the Patent Office is not estopped to deny the validity of its own grant, see *McKnight v. Van Wagenen* (1876), 9 O. G. 1161.

of the art or instrument for which a patent is desired. In certain cases it must be accompanied by drawings and a model or specimen of the invention. No application can be accepted by the Office for examination until it is complete in all its parts;¹ and where it has been signed or sworn to in blank or without actual inspection of the petition and specification, or has been altered or partly filled up after being signed or sworn to, it will be stricken from the files if such irregularity is discovered before the patent is delivered.²

§ 453. The Application-Petition: its Requisites.

The petition is a communication addressed to the Commissioner and duly signed by the applicant, requesting the grant of letters-patent for the invention described in the application. It must state the name and residence of the petitioner, and in its designation of the invention must contain words of reference to the specification for a fuller disclosure thereof.¹ It should also set forth the person on whose behalf the application is made and to whom the patent is desired to issue; declaring whether it be to the applicant himself, or whether, in case of a previous assignment, it be to the assignee of an entire interest alone, or jointly to the assignee of a part interest and the applicant.

§ 454. The Application-Oath: By and Before Whom Made.

The oath of the applicant is one of the most important portions of his application.¹ Being in many cases conclusive as

§ 452. ¹ That there can be no patent without an application, see *Railway Register Mfg. Co. v. Broadway & Seventh Ave. R. R. Co.* (1886), 26 Fed. Rep. 522; 34 O. G. 921; *Eagleton Mfg. Co. v. West, Bradley, & Cary Mfg. Co.* (1884), 111 U. S. 490; 27 O. G. 1237.

That an examiner should refuse to act unless there is a proper application before him on which to act, see *Ex parte Benton* (1882), 23 O. G. 341.

² That a blank application and oath signed and forwarded to Washington to be filled up does not comply with the law, and a patent granted thereon

is invalid, see *Ex parte Benton* (1882), 23 O. G. 341.

That the applicant must sign his first name in full, see *Ex parte Gentry* (1888), 44 O. G. 822.

§ 453. ¹ That the petition for a patent must so refer to the specification that the patent prayed for may be identified, see *Ex parte Mason* (1888), 43 O. G. 627.

§ 454. ¹ In *Ex parte Heginbotham* (1875), 8 O. G. 237, Spear, Act. Com.: (237) "The oath is a prerequisite to the granting of a patent. It was so held by Judge Story in the very case

to the facts therein alleged, it must conform strictly to the requirements of the law.² It must be made by the inventor, if alive, or if he be dead, by his personal representative.³ It can be taken before any person in 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 United States, or before any notary public, — the oath being in all cases attested by the official seal of the officer administering it.⁴

§ 455. The Application-Oath: its Averments.

This oath may be in the usual form of an oath, or in that of an affirmation. The applicant must swear that he does verily believe himself to be the original and first inventor of the art or instrument for which he desires a patent; that he does not know and does not believe that the same was ever before known or used; and that the invention has not been in public use nor on sale in the United States for more than two years preceding the date of the present application.¹ He must

in which he held the patent valid, notwithstanding the informality of the oath (*Whittemore v. Cutter*, 1 Gall.), and other courts have found the same; but, because the courts have sustained patents where some of the prerequisites to their granting have been ignored or dispensed with by the Office, it by no means follows, as contended by the present applicant, that it is a matter discretionary with the Commissioner."

That the oath is not a mere formality, but is necessary and gives *prima facie* validity to the patent, see *Ex parte Eaton* (1873), 4 O. G. 525.

That no patent can issue without the application-oath, see *Opinion Atty. Gen.* (1820), 1 Op. At. Gen. 332.

² That the oath, being often conclusive, must be made strictly according to law and before the proper officer, see *Warnant v. Warnant* (1880), 17 O. G. 265.

That the oath need not be dated, see *French v. Rogers* (1851), 1 Fisher, 133.

That the oath need not be in writing, see *Hancock Inspirator Co. v. Jenks* (1884), 21 Fed. Rep. 911.

³ That the application-oath must be made by the applicant, not by his agent or attorney, see *Opinion Atty. Gen.* (1861), 10 Op. At. Gen. 137.

⁴ That an oath in a foreign country to an application can be taken only before an officer designated under section 4802, there being no authority to take an oath except by statute, and the laws of a foreign country having no force as against the statute, see *Ex parte Gruson* (1884), 26 O. G. 274.

§ 455. ¹ That the oath must aver that the invention has not been in public use or on sale in this country for more than two years before the application, see *Ex parte Rowan* (1882), 22 O. G. 1037; *Ex parte Livingston* (1881), 20 O. G. 1747.

Whether the phrase "with the consent and allowance" of the inventor

also aver his citizenship and place of residence, and disclose the names, numbers, and dates of any foreign patents he may have obtained for the same invention.² This oath relates to the entire specification, and must be true concerning each and every portion of it, but does not include the model, in the construction of which parts may become necessary of which he is not the first and original inventor.³ It is also limited in its effect to the invention thus described, and with each amendment of the specification by which new matter is introduced as part of the original invention a new oath must be filed.⁴

§ 456. The Application-Oath : its Truth or Falsehood.

The averments of this oath concerning the originality of the invention relate only to the belief of the inventor, and the oath is not, therefore, a false one, nor the patent based thereon illegally obtained, though it be subsequently discovered that the invention has been previously known. But an oath wilfully false concerning the citizenship of the applicant, or any other matter made essential by the statutes, is a fraud

can properly be inserted in this averment must depend on the interpretation of the law of Abandonment as discussed in §§ 357, 358, and notes, *ante*.

That the oath must aver that the inventor does not believe that the invention was ever known or used before his inventive act, see *Ex parte Rowan* (1882), 22 O. G. 1037.

² That the applicant must disclose under oath all his foreign patents for the same invention, see *Ex parte Mason* (1888), 43 O. G. 627 ; Opinion Sec. Int. (1882), 21 O. G. 1197 ; *Ex parte Bland* (1879), 15 O. G. 828.

That the rule requiring disclosure of the date of foreign patents is reasonable, see *U. S. v. Marble* (1882), 22 O. G. 1365 ; and is authorized by Sec. 4887, Rev. Stat., see *Ex parte Toufflin* (1879), 15 O. G. 657.

That the disclosure of foreign patents must be definite and in the usual form, see *Ex parte Mason* (1888), 43 O. G. 627.

³ That the oath applies to and covers the entire specification, see *Ex parte Eaton* (1873), 4 O. G. 525 ; *Hogg v. Emerson* (1848), 6 How. 437 ; 2 Robb, 655.

That the oath must cover every feature claimed, see *Ex parte Clark* (1886), 36 O. G. 120 ; *Ex parte Foster* (1885), 33 O. G. 113.

That the oath does not relate to the model, see *Ex parte Eaton* (1873), 4 O. G. 525.

That an oath on a joint application relates to the whole, not to separate parts of the invention, see *Tieman, Simpson, & Collins* (1877), 11 O. G. 1.

That an application-oath relates only to the claimed inventions, for which a patent is solicited, see *Ex parte Crandall* (1886), 35 O. G. 625 ; *Drawbaugh v. Blake* (1883), 23 O. G. 1221.

⁴ For the form and other requisites of the amendment-oath, see § 561 and notes, *post*.

upon the government, and renders the patent void.¹ After the patent issues, however, the Patent Office has no jurisdiction over it, and cannot entertain the question whether the oath were true or false.²

§ 457. The Application-Oath : how far Conclusive.

The oath is in all cases *prima facie* evidence that the applicant is the first and true inventor, and in uncontested cases in the Patent Office is conclusive upon all the matters to which it relates. Where rival applications are filed, each containing the same oath made by its own applicant, the contradictory affidavits nullify each other, and the question is open to further proof without bias toward either party.¹ The averments of the oath concerning the grant of foreign patents for the same invention to the applicant add nothing to the force of the oath as evidence of the originality of his invention.²

§ 456. ¹ That a false oath of citizenship is an irremediable defect and avoids the patent, see *Child v. Adams* (1854), 3 Wall. Jr. 20 ; 1 Fisher, 189.

² That after a patent has once issued the Patent Office cannot inquire whether the application-oath were true or false, see *Ex parte Gillen* (1877), 11 O. G. 419.

§ 457. ¹ In *Little v. Lillie* (1876), 10 O. G. 543, Duell, Com. : (544) "When an application is made the party is required to make oath that he verily believes himself to be the first and original inventor ; and this is received as evidence of the fact, and renders the patent, when granted, *prima facie* evidence that the patentee is the first and original inventor. (*Philadelphia & Trenton Railroad v. Stimpson*, 14 Pet. 458 ; *Corning v. Burden*, 15 How. 270 ; *Parker v. Stiles*, 5 McLean, 60.) When, however, a party claims an invention which is described and may be claimed by another applicant or patentee, the oath of one nullifies that of the other, and it becomes a mat-

ter for further proof as to which one is, in contemplation of law, the first and original inventor. It is for this purpose that an interference is declared, not to determine the patentability of the invention, but whether the party claiming it is the person designated by the statute as the originator of the invention. This distinction is observed throughout all the statutes on this subject."

See also *Bartholomew v. Sawyer* (1859), 1 Fisher, 516 ; 4 Blatch. 347.

² That the affidavit of an applicant concerning his foreign patents is only presumptive evidence that he is the real inventor, see *Ex parte Nagel* (1880), 17 O. G. 198.

That the oath of an applicant that another had obtained a patent in England for the *same* invention, as one communicated to him, is conclusive evidence that the applicant is the sole inventor until the contrary appears, see *Von Alteneck v. Thomson* (1880), 17 O. G. 571.

§ 458. **The Application-Oath: Letters-Patent not Invalidated by its Omission.**

Although the oath is one of the essential portions of the application, and cannot be dispensed with by the Patent Office, yet a patent granted without an oath is not on that account invalid.¹ The presumption that all things were rightly done in the department is sufficient to sustain it in all suits, except those which are instituted directly for its repeal.²

SECTION IV.

OF THE APPLICATION: ITS SUBJECT-MATTER.

§ 459. **Subject-Matter of Application must be a Patentable Invention.**

The subject-matter of the application for a patent must be a patentable invention. It must be a concrete art or instru-

§ 458. ¹ In *Crompton v. Belknap Mills* (1869), 3 Fisher, 536, Clark, J. : (541) "Suppose the oath was not taken, would the patent be void on that account? It was held otherwise by Justice Story, in the case of *Whittemore v. Cutter*, ¹ Gall. 429. The taking of the oath, though to be done prior to the granting of the patent, is not a *condition precedent*, failing which the patent must fail. It is the evidence required to be furnished to the Patent Office that the applicant verily believes he is the original and first inventor of the art, etc. If he takes this oath, and it turns out that he was not the first inventor or discoverer, his patent must fail and is void. So, if he do not take it, and still he is the first inventor or discoverer, the patent will be supported. It is *prima facie* evidence of the novelty and originality of the invention until the contrary appear. *Parker v. Stiles*, 5 McLean, 60. So the act says, on payment of the duty, — that is, fees, —

the Commissioner shall make an examination, and, if the invention shall be found useful and important, shall issue a patent. Suppose the fee should not be required or paid, would the patent, therefore, be void? Yet the one requirement appears to be as much a condition precedent as the other. Both directory, not to be dispensed with; but neither involving the validity of the patent when granted."

See also *Hartshorn v. Eagle Shade Roller Co.* (1883), 18 Fed. Rep. 90; 25 O. G. 1191; *Dyer v. Rich* (1840), 1 Met. 180; *Whittemore v. Cutter* (1813), 1 Gallison, 429; 1 Robb, 28.

² That an oath will be presumed from the grant of a patent, see *Hoe v. Kahler* (1885), 25 Fed. Rep. 271; 34 O. G. 127; affirming s. c. in 20 Blatch. 430; 12 Fed. Rep. 111.

That there is no presumption that the records of the Patent Office show all that was done, see *Hoe v. Kahler* (1885), 25 Fed. Rep. 271; 34 O. G.

ment, embodying an idea of means conceived by the creative faculties of the inventor, belonging to one of the six classes enumerated in the statutes, and being new, useful, and not already abandoned by the inventor to the public.¹ For nothing less than this can any valid patent be granted; and, of course, for nothing less can any application for a patent be entertained. These characteristics of a patentable invention have been sufficiently discussed, and therefore here demand only this passing reference. There are, however, a few additional provisions of the law, particularly relating to the scope of an application for a patent, which require our present notice. These may be grouped into: (1) Rules which compel an applicant to limit his application by the Claims of patents

127; affirming s. c. in 20 Blatch. 430; 12 Fed. Rep. 111.

That the recital in a patent that the oath was taken is conclusive until fraud is shown, though the patent issues on an amended application, see *Hancock Inspirator Co. v. Jenks* (1884), 21 Fed. Rep. 911; *Seymour v. Osborne* (1870), 11 Wall. 516.

§ 459. ¹ In *Starr v. Farmer* (1883), 23 O. G. 2325, Teller, Sec. : (2327) "The question whether an invention has been perfected and is capable of useful operation has to be determined in the consideration of every application for a patent; for until a conception has been shown to be complete and capable of useful adaptation, requiring no further invention to make it practically operative, a patent therefor cannot be legally issued. To provide the means from which the Commissioner of Patents may decide upon the patentability in this respect of a discovery, the law prescribes that an applicant for a patent shall file a written description of the invention, and of the manner and process of making, constructing, 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 to construct and use the same;

and he is further required to illustrate it by drawings. Patents are constantly issued for inventions the utility and completion of which are not shown otherwise than by the specifications and drawings, the cases being exceptional in which the applicant is required to present an operative model to demonstrate his discovery. Where an original discoverer has made a formal application for a patent in conformity with the requirements of the law, has furnished a description of the invention, which with the drawings and the model, if required by the Commissioner, is a sufficient disclosure to a person skilled in the art of the practical utility of an invention which in other respects is patentable, and has evinced by diligent prosecution of his application a faith in its importance, it is not necessary, to entitle him to be considered an inventor, that he shall prove actual reduction to practice. It is enough, if he has shown, in the manner prescribed in the law, that the invention is perfect and capable of useful operation."

That where the invention is obviously impracticable the application must be rejected, see *Ex parte De Bausset* (1888), 43 O. G. 1583.

that he has previously obtained ; and (2) Rules which govern the joinder of separate inventions in a single application.

§ 460. Subject-Matter must not be an Invention already Patented in the United States by the same Inventor.

Two patents cannot be granted by the United States to the same inventor for the same invention. Its power to create a monopoly is exhausted by the first grant, and hence the later patent must be absolutely void.¹ That the application on which the later patent is based was of earlier date than that in pursuance of which the first patent issued is immaterial.² The government, having once conferred upon the inventor all it had to bestow in reference to that invention, cannot add to his exclusive privilege by a repetition of its granting act ; and therefore, where the scope of both the earlier and the later patents is the same, the former is the only one by which the rights of the inventor are secured. And since no application for a patent can be proper where the patent, if allowed, would be invalid, an application for a patent for any invention covered by a previous patent to the same inventor is prohibited.

§ 461. Subject-Matter may be an Invention already Patented in the United States by a Rival Inventor, or in a Foreign Country by the same Inventor.

This rule applies, however, only where the same inventor seeks an additional patent from the United States. The later

§ 460. ¹ That there cannot be two concurrent American patents to the same inventor for the same invention, and that where two such patents are issued the last is void, see *McMillin v. Rees* (1880), 1 Fed. Rep. 722 ; 17 O. G. 1222 ; 5 Bann. & A. 269 ; *Ex parte Locke* (1879), 16 O. G. 1140 ; *Ex parte Langlois* (1878), 14 O. G. 84 ; *Ex parte Cottrell* (1876), 9 O. G. 495 ; *Jones v. Sewall* (1873), 3 O. G. 630 ; 3 Clifford, 563 ; 6 Fisher, 343 ; *Suffolk Co. v. Hayden* (1865), 3 Wall. 315 ; *Treadwell v. Bladen* (1827), 4 Wash. 703 ; 1 Robb, 531 ; *Morris v. Huntington* (1824), 1 Paine, 348 ; 1 Robb, 448 ; *Odiorne v. Amesbury Nail Factory* (1819), 2 Mason, 28 ; 1 Robb, 300 ; *Barrett v. Hall* (1818), 1 Mason, 447 ; 1 Robb, 207.

² That a later patent to the same inventor is void, though its application were earliest, see *McMillin v. Rees* (1880), 1 Fed. Rep. 722 ; 17 O. G. 1222 ; 5 Bann. & A. 269.

application of a rival inventor assumes that no monopoly has been created in favor of his adversary by the former patent, that patent being invalid because granted to one who was not, as the law requires, the original and first inventor.¹ The application of the same inventor for a re-issue of his former patent, so amended as to protect his actual invention, is merely an endeavor to secure in express terms the privilege which the government has already ambiguously bestowed.² And where the same inventor who has obtained a patent from a foreign state subsequently makes an application for a patent in the United States, the monopoly he seeks is one essentially distinct in territorial limits from that which he has previously received, and therefore one which may yet be conferred upon him by the government within whose gift it still resides.³ It is when the granting of a patent on the present application would be the mere empty repetition of the granting act, as distinguished from the clearer definition of a monopoly already in existence, and from the creation of a new monopoly either in favor of the same inventor or his rival, that the application is improper and must on that account be refused.

§ 461. ¹ That a patent issued to a rival inventor is no bar to a later one to the true inventor, see *Hibbard v. Richmond* (1880), 17 O. G. 1155.

That where two patents to different inventors cover the same general invention the later will, if possible, be construed to claim only the new matter appearing therein, see *Richardson v. Noyes* (1876), 10 O. G. 507.

² That upon the surrender of a former defective patent a later one may be granted and be valid, see *Jones v. Sewall* (1873), 3 O. G. 630 ; 3 Clifford, 563 ; 6 Fisher, 343.

³ That a prior foreign patent does not invalidate though it limits the term of a subsequent American patent, see *Dolbear v. American Bell Telephone Co.* (1888), 126 U. S. 1 ; 43 O. G. 377.

That a prior foreign patent does not prevent the issue of a broader American patent, see *Faure v. Bradley* (1888), 44 O. G. 945.

That the grant of surreptitious foreign patents to others cannot affect the rights of the real inventor in the United States, see *Kendrick v. Emmons* (1875), 2 Bann. & A. 208 ; 9 O. G. 201.

That under section 8, act of 1836, no American patent could be granted if the foreign patent issued more than six months before, see *Cornely v. Marckwald* (1883), 17 Fed. Rep. 83.

That a foreign patentee seeking an American patent is not compelled to adhere to the precise subject-matter of his foreign patent, see *Ex parte Siemens* (1877), 11 O. G. 969.

§ 462. Subject-Matter must not Include Inventions already Patented in the United States by the same Inventor.

An application which, together with new matter, includes matter already patented in the United States by the same inventor is within this rule, as well as one whose scope corresponds exactly with that of the preceding patent.¹ An inventor who devises an improvement to his own patented invention cannot apply for and obtain a patent for the whole invention as improved, but only for the new development of his original idea.² The inventor of a combination, the elements of which are already protected by his previous patents, cannot obtain additional protection for those elements by claiming them in his application for a patent for the combination. In both these instances, as in all similar ones, it may be necessary to the comprehension by the public of his last invention that the former should be fully described in the new application, but the application itself must so distinguish the earlier invention from the later that it shall clearly appear to be an application for a patent only for the last invention.

§ 463. Subject-Matter may be a New Use of an Invention already Patented in the United States by the same Inventor.

An application for a patent for a previously patented invention by the same inventor, on the ground that new uses for it have been discovered since the issue of the former patent, is also forbidden by this rule.¹ All uses to which an invention can be put, whether by its inventor or by others, without an additional exercise of inventive skill, are covered by the original patent for that invention, even although such uses were unknown when the patent issued; and hence another patent, based upon such uses, would be a simple duplication

§ 462. ¹ That no patent with generic Claims can be granted after one with a Claim for the species, see *Ex parte Upton* (1884), 27 O. G. 99; *Ex parte Holt* (1884), 29 O. G. 171.

² That an inventor may patent an improvement on his own invention, see *O'Reilly v. Morse* (1853), 15 How. 62.

§ 463. ¹ That a second patent cannot issue for the same invention though used for separate purposes, see *McComb v. Brodie* (1872), 5 Fisher, 384; 2 O. G. 117; 1 Woods, 153.

See also §§ 259-271 and notes, *ante*.

of the grant. Where a new use for the invention is discovered by the exercise of the inventive faculties of the same or other inventors, the new use is itself a new invention, and if possessing all the other statutory requisites, it may be patented as a new art or combination in which the old invention is employed as an instrument, or as an elemental means; but it adds nothing to the patentable character of the original invention, nor does it constitute any ground for the protection of that invention in another patent. Here, also, the application for a patent for the new art or combination may have occasion to describe the former invention in order to convey an adequate idea of the new use which is to be the subject of the future patent; but the distinction between the old invention and the new must be apparent on the face of the application, and a patent for the latter only must be claimed.

§ 464. Subject-Matter must not be an Invention already Patented in the United States by the same Inventor, although his Former Patent is Inoperative and Invalid.

An application for a new patent by the same inventor where his previous patent, although not covering his entire invention, is capable of being re-issued so as to afford it a complete protection, is within this rule. An important difference must be here remembered between an invention as it appears upon the face of a patent and as it exists practically in the arts. Some concrete inventions are simple units, the result of a single inventive act, not separable into distinct patentable parts, and any patent for such an invention must either protect the whole product of the inventor's skill or fail to protect anything whatever. Other concrete inventions consist of parts, each of which is an independent invention and separately patentable; and a patent for the entire invention may be valid and sufficient although its inventor makes no attempt to protect therein the individual inventions of which it is composed. Only a patent for an invention of the former class can properly be brought within this rule. A patent for a simple unitary invention, if properly expressed, protects everything that the inventor has invented, and any failure to secure to

him the entire monopoly to which he is entitled can be cured by a correction of its verbal ambiguities. It is an act of the government bestowing a particular exclusive privilege, and although the limits of that privilege may be uncertain on account of some defect in the language by which it is described, the grant is an effectual one, and cannot be repeated however it may need to be defined.¹ Hence an amendment of the patent by re-issue is not only a sufficient remedy for the inventor, but it is all the remedy to which, in accordance with the theories that underlie the Patent Law, he is entitled.

§ 465. Subject-Matter may be an Integral Part, or a Combination, of other Inventions already Patented in the United States by the same Inventor.

On the other hand, where a concrete invention is composed of parts each of which is the result of a separate inventive act, it is optional with the inventor either to protect all these inventions by a single patent or to apply for and obtain different patents for the several subordinate inventions. If in his first application for a patent he endeavors to secure protection for all, and if in his first patent the government evidently confers upon him a monopoly as to all, however imperfectly the grant of the monopoly may be expressed, no new application for a patent for any of them can be entertained; and the inventor must avail himself of his right to a re-issue, or remain without remedy.¹ But if the inventor has attempted in his former application only to procure a patent for the concrete invention as a whole, or for some one or more of its several

§ 464. ¹ In *Ex parte Roberts* (1887), 40 O. G. 573, Hall, Com.: (574) "Where the invention is one, integral, and indivisible, whether it relates to different parts of a single organization or combination, or process and product, or genus and species, a prior patent which claims or covers part of the whole invention, in legal contemplation takes the whole invention out of the field of patentability, whether the subsequent applicant be the original patentee or some other person."

Further, that a new patent cannot cover matter inseparably involved in the matter claimed in a former patent, see *Railway Register Mfg. Co. v. Broadway & Seventh Ave. R. R. Co.* (1886), 26 Fed. Rep. 522; 34 O. G. 921; *Ex parte Holt* (1884), 29 O. G. 171; *Ex parte Ransom* (1884), 39 O. G. 119.

§ 465. ¹ That a patent for parts of a previously patented invention is void if the prior patent attempted to claim such parts, see *Stow v. Chicago* (1877), 3 Bann. & A. 83; 8 Bissell, 47.

parts, the monopoly which he has received is limited to those results of his inventive skill, and all other results are still proper subjects for new applications and new patents, unless he has meanwhile abandoned them to the public.² That in his former patent he described these other inventions as elements of the one then patented, or as associated with it in that concrete invention in which all unite, cannot affect his right to base on them new applications and new patents.³

² That a combination and its elements are distinct inventions, and a patent for the former does not cover the latter, see *Rowell v. Lindsay* (1885), 113 U. S. 97; 31 O. G. 120; *Corn Planter Patent* (1874), 23 Wall. 181; 6 O. G. 392.

That unless abandoned by two years' public use and sale a sub-combination may be covered by a later patent, see *Cahn v. Wong Town On* (1884), 9 Sawyer, 630; 19 Fed. Rep. 424; 27 O. G. 299.

That separate parts of the same invention may be separately patented, see *Jones v. Sewall* (1873), 3 Clifford, 568; 6 Fisher, 843; 3 O. G. 630.

³ It has been sometimes held that no new patent could be granted for an invention described but not claimed in a former patent, and that the only mode of bringing such unclaimed inventions within the protection of the law is by a re-issue of the former patent. Thus in *Mathews v. Flower* (1885), 25 Fed. Rep. 830, Brown, J.: (830) "If it were true that complainants had previously obtained a patent for the same invention secured to them by the patent in suit, and that this prior patent had expired, it would doubtless be a complete answer to this bill, since a man cannot have two patents for the same invention. *James v. Campbell*, 104 U. S. 356; *Suffolk Co. v. Hayden*, 3 Wall. 315; *Morris v. Huntington*, 1 Paine, 348. And this disability extends, not only to what is

claimed in the first patent, but to that which is described therein as the patentee's invention. If a man cannot have a patent for what another has claimed or described in a prior patent, much less can he have one for what he himself has claimed or described; for he thus shows that he has anticipated himself. *James v. Campbell*, 104 U. S. 356, 382." 33 O. G. 887 (887).

In *Ex parte Long* (1883), 25 O. G. 1189, Marble, Com.: (1190) "An applicant is entitled to fully describe, show, and claim his invention; but having shown and described it in a patent he has no right to thereafter file an application and obtain a patent for subject-matter shown and described in such patent. If he have any remedy in such case it is by re-issuing his patent. In *Ex parte Atwood* (C. D., 1869, p. 98), Mr. Commissioner Fisher said: 'When an application is filed every invention contained in that application must be patented under it or under such division of it as the wishes of the applicant and the rules of the Office may permit.' Since said decision the practice of the Office has been uniform in requiring an applicant, if he desires to obtain a patent for subject-matter shown and described in his application, but not properly patentable therein, to file another application for such matter during the pendency of the former application. This practice has been sustained by the courts, and none other seems to have been adopted or insisted

Being entitled under the law to a monopoly for each invention, he cannot be precluded from receiving it by anything

upon until the present time. An applicant has the right to file his application and claim so much of his invention as he wishes or sees fit; but he has no right to reserve a portion of it, and thereafter claim such reserved portion, and thus, in fact, extend the life of his patent. If this could be done, the actual term of a patent would not be seventeen years, but a longer term. A party cannot prevent abandonment by simply stating that he does not abandon a certain invention. Abandonment is always a question of fact. Parties are presumed to intend what they do, and if they expressly reserve, or by oversight or negligence fail to claim, subject-matter shown and described in a patent, the presumption is that they intend to abandon it, especially if they do not file an application therefor prior to the issuance of the patent wherein it is shown and described."

See also *Swift v. Jenks* (1887), 29 Fed Rep. 642; 38 O. G. 1017; *Hill v. Commissioner* (1885), 4 Mackay, 266; 33 O. G. 757; *Ex parte Derby* (1884), 26 O. G. 1208; *Ex parte Hill* (1883), 24 O. G. 1176; *Marvin v. Lillie* (1867), 27 O. G. 299.

These cases, except the last, base their assertions upon a hasty and mistaken interpretation of *Campbell v. James* (1882), 104 U. S. 356; 21 O. G. 337. The passage usually quoted in support of this position does at first blush, perhaps, appear to sustain it. But more careful scrutiny would have shown that the learned Justice employed the words "embraced or described" as synonymous with "patented" and "claimed;" and would further have disclosed the following statement on page 370 (104 U. S.), which places the whole doctrine in its proper light: "If he was the author of any other invention than that which

he specifically describes and claims, though he might have asked to have it patented at the same time and in the same patent, yet if he has not done so, and afterward desires to secure it, he is bound to make a new and distinct application for that purpose and make it the subject of a new and different patent." That this is the true construction of this entire decision, see *Vermont Farm Machine Co. v. Marble* (1884), 27 O. G. 621; 22 Blatch. 32; 19 Fed. Rep. 307.

But apart from authority this doctrine is manifestly incorrect in principle, as well as inapplicable in practice. For were it true, every intentional omission to claim any invention which the application had described would operate as an abandonment of the invention to the public, since no intentional omission can be cured by a re-issue; and thus an applicant would be compelled to claim every invention which a proper delineation of his principal invention required him to disclose, whatever violations of the rules of joinder he might thus commit, or however premature the submission of the invention to the public as a practically operative means might be. To avoid this dilemma, a qualification has been introduced into the doctrine, permitting a subsequent patent for inventions described but not claimed in the former patent, provided a reservation of the right to apply for and obtain the subsequent patent were inserted in the former, and the later application were filed within a reasonable time after the issue of the prior patent. This modification of the doctrine is discussed and sustained in *Ex parte Roberts* (1887), 40 O. G. 573, by Hall, Com.: (573) "It is undoubtedly true that when a patent issues for an invention, all of which is shown but only part of which is claimed,

short of its bestowal on him by the government, or by his abandonment of the invention to the public; and until one or

there is a dedication to the public of that part which is unclaimed. In such case the law conclusively infers an intention to make the dedication, and the inference cannot be overcome by evidence; the applicant, however, always has it in his power, in a certain class of cases, to prevent this inference from arising if he acts in time. In cases which are divisional, -- that is, when, as in the present case, the features not claimed in the first application are independent of those claimed, -- an applicant may expressly assert in his application a reservation of his right to claim them in another or subsequent application, and he should present and prosecute such application without delay. He may also file his second application so as to have it pending concurrently with the first. Such course anticipates and prevents the inference of dedication. This proposition is fully sustained by many authorities."

See also *Adams v. Bellaire Stamp-ing Co.* (1886), 28 Fed. Rep. 360; 36 O. G. 567; *Ex parte Derby* (1884), 26 O. G. 1208; *Ex parte Rohn* (1883), 25 O. G. 1190.

But even with this qualification the doctrine is not in harmony with the general spirit and theory of the Patent Law, nor with the requirements of inventors and the public. The general theory of the Patent Law contemplates every invention as a separate entity, wholly independent of every other invention, and entitled to a distinct monopoly if it possesses the necessary attributes of a patentable invention. That in the application for a patent for a different invention it may become expedient to describe this also cannot affect its patentable character, nor does it raise a conclusive presumption of abandonment. If such description is followed by a

two years' public use or sale, or is coupled with any other circumstances indicating a dedication of the invention to the public, the right to a monopoly will be lost; but this loss is not occasioned by the previous description of the invention in the former patent, nor by the failure to reserve the invention for a future patent, these being but single links in the chain of facts from which an intention to abandon is inferred. Moreover it is to the advantage both of the inventor and the public that he should be entirely free to patent his inventions separately and in such order as his inventive prudence may suggest, since on the whole it is far more probable that he will bestow the invention on the public as soon as it is ripe for beneficial use, than that after disclosing it in the description of a former patent he should withhold it after it becomes available for their employment and his own profit. Thus as no evil can result to the community by the application to his described but not claimed inventions of the same rule of reasonable diligence which governs cases of re-issue and other cases arising under the common doctrine of abandonment, the consistency of the law would seem to require that matter described but not claimed in a former patent may be the subject of a later patent unless it has been in some manner already dedicated to the public. This is the position maintained in *Vulcanite Paving Co. v. American Artificial Stone Paving Co.* (1887), 42 O. G. 828; *Wilson v. Cubley* (1886), 26 Fed. Rep. 156; 35 O. G. 257; *Ex parte Holt* (1884), 29 O. G. 171; *Vermont Farm Machine Co. v. Marble* (1884), 19 Fed. Rep. 307; 27 O. G. 621; 22 Blatch. 32; *Graham v. McCormick* (1880), 11 Fed. Rep. 859; 21 O. G. 1533; 10 Bissell, 39; 5 Bann.

the other of these events has taken place his application must be entertained and his claim for an exclusive privilege be

& A. 214; *Graham v. Geneva Lake Crawford Mfg. Co.* (1880), 11 Fed. Rep. 138; 21 O. G. 1536.

In *Ex parte Holt* (1884), 29 O. G. 171, are discussed three classes of cases:—

1. Those holding that no patent can issue for an invention actually covered by a former patent though the terms of their Claims may differ, viz., *Sickels v. Falls Co.*, 4 Blatch. 508; *O'Reilly v. Morse*, 15 How. 62; *Odiorne v. Amesbury Nail Factory*, 1 Robb, 800; *Smith v. Ely*, 5 McLean, 76.

2. Those where the second patent contained a broad or generic Claim covering the more specific matter protected by the former patent, viz.: *Jones v. Sewall*, 3 Clifford, 575; *James v. Campbell*, 104 U. S. 356; 21 O. G. 337; *McKay v. Jackman*, 22 O. G. 85, overruling *McKay v. Dibert*, 19 O. G. 1351; *Ex parte Atwood*, C. D. 1869, 98; *Ex parte Lowe*, C. D. 1870, 39; *Ex parte Hyde*, C. D. 1871, 109.

3. Those where the new patent covers matter described in the prior patent but essentially distinct and separable from anything claimed therein. Concerning the latter cases, *Dyrenforth, Act. Com.*, says: (177) "It has, it is true, been held that a person can independently patent that which has been shown and described but not claimed in a previous patent upon a concurrent application. Authorities upon this subject are, *The Suffolk Co. v. Hayden* (3 Wall. 315); *Singer & Clark v. Braunsdorf and Weil* (7 Blatch. 521); *McMillen et al. v. Reese et al.* (17 O. G. 1222); *Graham v. McCormick et al.* (11 Fed. Rep. 859); *Hatch v. Moffit* (15 Fed. Rep. 252); *Ex parte Emerson* (17 O. G. 1451); *Ex parte Derby* (26 O. G. 1208). These cases, however, are easily distinguishable from the case

of *James v. Campbell* and that here involved. In all of them that which was independently patented was either a distinct and separate part of the invention or a distinct improvement thereon. It was not substantially the same thing comprehended in the first patent. There was not a mere distinction of breadth or scope of Claim. The remedy where a broad Claim is omitted is pointed out in the *Derby* case, *supra*."

In the first and second of these classes the later patent, so far as it covers the matter protected by the former patent, must be absolutely void; and if the new matter is inseparable from that already patented, the whole grant must fail. In such cases no reservation in the former patent can aid the inventor, but as *Dyrenforth, Act. Com.*, in the same decision remarks: (177) "It is clear that if the law prohibits a separate patent for anything but a distinct and separate part of the thing invented, the applicant may not evade the prohibition by reserving the broad claims by a statement in his specific patent; he cannot reserve that which the law forbids him to reserve."

That reservation clauses tend to mislead the public and should not be allowed in applications, see *Ex parte Blair* (1888), 43 O. G. 113.

That where the subject-matter is properly divisible the inventor may file his separate applications at any time without any reservation clause, and each will be judged on its own merits, see *Ex parte Blair* (1888), 43 O. G. 113.

That where the subject-matter is not divisible the second application must be filed while the first is pending, that both may be adjudged together, see *Ex parte Blair* (1888), 43 O. G. 113.

That where one application fully dis-

recognized. To compel him in such cases to have recourse to a re-issue would not only be contrary to the fundamental ideas on which the doctrine of re-issue rests, but would deprive him of a greater or less portion of that term for which the law provides that his monopoly shall endure.

§ 466. Subject-Matter may be an Invention Dependent on or Collateral to an Invention already Patented in the United States by the same Inventor.

Again, this rule does not apply to cases where the same inventive act produces two concrete results, each of which is a separate patentable invention. A single exercise of the inventive faculties may produce both a process and its product, a machine and the manufacture it creates, a composition of matter and the art by which it is applied to its intended use. In all such cases, if the inventions are truly separable, the inventor is entitled to a monopoly for each, although neither could have been discovered and been made available without the other.¹ A patent for but one, though it may necessarily

closes the invention claimed in the other, cross-references should be inserted in each to distinguish one from the other, see *Ex parte Blair* (1888), 43 O. G. 113.

That a description in a prior patent without a Claim of the invention is not a bar to a subsequent patent, if the second application is made within two years, see *Eastern Paper Bag Co. v. Standard Paper Bag Co.* (1887), 41 O. G. 231; 30 Fed. Rep. 63.

See also § 352 and notes, *ante*, and § 506 and notes, *post*. The doctrine stated in §§ 687-692 and notes, *post*, in reference to re-issues is equally applicable to the present subject, since any patentable matter which could be inserted in a re-issue may, if constituting a complete invention in itself, be protected by a separate patent.

§ 466. ¹ That a process and its product may be separately patented, see *Ex parte Lupton* (1874), 5 O. G. 489 ;

Jones v. Sewall (1873), 3 Clifford, 563 ; 3 O. G. 630 ; 6 Fisher, 343 ; *Brass Co. v. Miller* (1871), 5 Fisher, 48 ; 9 Blatch. 77 ; *Goodyear v. Providence Rubber Co.* (1864), 2 Clifford, 351 ; 2 Fisher, 499.

That no patent can be granted for the product after one for the process from which that product necessarily results, the second patent being in effect a duplication of the first, see *Ex parte Holt* (1884), 29 O. G. 171.

That a patent having issued for a product as made by a certain process, a later patent cannot be granted for the process which results in the product, see *Mosler Safe & Lock Co. v. Mosler* (1888), 127 U. S. 354 ; 43 O. G. 1115.

That a machine and its product may be separately patented, see *Ex parte Lupton* (1874), 5 O. G. 489 ; *Brass Co. v. Miller* (1871), 5 Fisher, 48 ; 9 Blatch. 77.

That where a patent has been granted

describe the other, is thus no hindrance to an application for a patent for the unsecured invention ; but the new application must be judged according to its own intrinsic merits, as if no previous patent had been granted.²

§ 467. Subject-Matter must not be an Invention already Claimed in a Pending Application by the same Inventor.

The rules which in this manner limit the scope of applications by the monopolies previously granted to the same inventor define the relations which two or more applications by the same person must sustain toward each other. As two patents cannot be granted to the same inventor for the same invention, so two applications attempting to secure patents for the same patentable subject-matter are equally objectionable. An inventor, having prepared and filed an application for a patent, cannot file another application for the same concrete invention, except as an amendment to the former, unless he first withdraws from the earlier the matter which he wishes to incorporate into the later.¹ This, for some purposes to be

for a machine which produces a certain article, a subsequent patent cannot be granted for the article, though it might have been covered by the machine-patent, see *Excelsior Needle Co. v. Union Needle Co.* (1885), 32 Fed. Rep. 221.

That a second patent for a special application of the force to the object named in a rejected Claim of the former application is valid, see *O'Reilly v. Morse* (1853), 15 How. 62.

² That the description of a process in an application for a patent for the apparatus does not prevent a patent for the process, if applied for within two years, see *Eastern Paper Bag Co. v. Standard Paper Bag Co.* (1887), 41 O. G. 231 ; 30 Fed. Rep. 63.

§ 467. ¹ That an inventor cannot file a second application, after the patent is ready to issue on the first, for a device rejected on the prior application, but must re-issue the first patent and claim it there, see *Ex parte Arkell* (1877), 11 O. G. 1111.

That where two applications describe the same invention and the later one does not claim it, a patent not covering it may issue on the later application, and a patent covering it on the earlier application, see *Ex parte Emerson* (1879), 16 O. G. 1232.

That an applicant cannot claim matter covered by the Claim of a previous application, see *Ex parte Holt* (1884), 29 O. G. 171.

That after an application has passed to issue no other one covering the same matter should be passed, see *Ex parte Gaboury* (1886), 37 O. G. 217.

That a second application will not be rejected merely because a prior one by the same applicant is still pending, see *Ex parte Gaboury* (1886), 37 O. G. 217.

That matter described and not claimed in one application can be claimed in a second application filed pending the prior one, but not if the whole patentable matter is indivisible, see *Ex parte Holt* (1884), 29 O. G. 171.

hereafter stated, he is allowed to do; but in such cases each of his applications must clearly show, by proper allegations of disclaimer, that the limits of the monopoly for which it prays do not include any part of the subject-matter of the others.²

§ 468. **Joinder of Inventions not Consistent with the Nature of the Patent Privilege: but nevertheless Permitted.**

The joinder of several inventions in a single application is not altogether consistent with the principles or the policy of Patent Law, however nearly related to each other such inventions may be. A right to the exclusive use of one invention is entirely distinct from a right to the exclusive use of any other, and the monopolies created in favor of an inventor must therefore always be as numerous as the inventions upon which they are based. That several monopolies can be created by one granting act, and can be witnessed by one instrument of grant, is undeniable; but the symmetry of the law and the avoidance of unnecessary confusion would require that each invention be protected by a separate patent, in which the limits of the single monopoly conferred thereby might be clearly and perpetually defined. A contrary practice, however, has arisen, and out of consideration for its convenience and its economy to applicants has been sanctioned by the Patent Office and the courts.

§ 469. **Joinder of Inventions Differently Viewed in the Courts and in the Patent Office.**

The rules by which the limitations of this practice are declared, and the evils naturally flowing from it are as far as possible avoided, are not in all respects the same in the

² That where two applications describe, and one of them claims an invention, the one not claiming must disclaim it, and refer to the other by its date and number, see *Ex parte Blair* (1888), 43 O. G. 113; *Ex parte Finch* (1883), 26 O. G. 273.

That the rules requiring cross-disclaimers in two pending applications for the same general invention are strictly

enforced, see *Drawbaugh v. Blake* (1883), 23 O. G. 1221.

That the rule requiring disclaimers where two pending applications describe but only one claims an invention is merely directory, and the issue of the first patent is no bar to the second, unless the subject-matter is one, integral, and indivisible, see *Ex parte Roberts* (1887), 40 O. G. 572.

Patent Office as in the courts.¹ The practice was adopted before the re-organization of the patent system in 1836, and when the only questions involved in it, of importance to the public, related to the intelligibility of the specification and the amount of fees received for patents by the government. In their disposition to encourage inventors by every means that the language of the statutes would permit, the courts sustained patents covering several different inventions, and laid down rules for their own guidance in the matter which there has been no later judicial occasion to disturb. But when the present method of examining the novelty and utility of an invention before the issue of a patent was inaugurated, the liberality shown by the courts toward this practice was found to be irreconcilable with the proper fulfilment of its duties by the Patent Office; and as these duties have increased, and a greater subdivision of its operations has from time to time become essential, the introduction of more rigid rules has been inevitable, in order that the work of examining an application might not have to be repeated in several different divisions of the department, and that after the patent issued the specifications and drawings might be placed for future reference in some specific group of inventions, without unnecessary re-duplication.² To present a complete view of this subject a

§ 469. ¹ In *Ex parte Bancroft* (1881), 20 O. G. 1893, Marble, Com. : (1894) "I am aware that the courts have sustained patents where two inventions embraced therein were made to accomplish the same end and purpose. See *Wyeth et al. v. Stone et al.*, 1 Story, 273. Also, patents containing an invention which might be applied in different ways. See *Hogg et al. v. Emerson*, and cases cited, 6 How. 437. It is also true that the courts have sometimes sustained patents which ought never to have been granted, in order to protect the rights of parties. My attention has been called to the fact that patents have been issued for a process and product, a machine, process, and product, and a machine and product; and, as I think,

in many cases improperly. The fact that the courts will sustain patents in order to protect the rights of parties, or that patents have been improperly issued, furnishes no rule of action for this Office."

² That joinder does not follow the same rules in the courts as in the Patent Office, and the former will rarely declare a patent void for misjoinder, though the necessities of the Patent Office may often require separation, see *Ex parte Herr* (1887), 41 O. G. 463.

That it is for the Patent Office to determine whether a joinder shall be allowed, see *Ex parte Sartell* (1888), 42 O. G. 295; *Sessions v. Romadka* (1884), 21 Fed. Rep. 124; 28 O. G. 721; *McKay v. Dibert* (1881), 19 O. G. 1351;

statement of the rules as they appear in the judgments of the courts and in the decisions of the Patent Office must be made, both generally and in their application to particular classes of inventions.

§ 470. Joinder of Inventions: Rule in the Courts.

The general rule adopted by the courts and sanctioned by the uniform current of decisions permits the joinder of several inventions in one patent where the inventions are kindred and auxiliary, — that is, where they are capable of being used in connection with each other to serve a common end.¹ It is

5 Fed. Rep. 587; *Ex parte Möller* (1879), 16 O. G. 358; *Bennet v. Fowler* (1869), 8 Wall. 445.

That doubt as to joinder is resolved in favor of the applicant, see *Ex parte Herr* (1887), 41 O. G. 463.

That the question of joinder must be determined to some extent by the Office classification, but not by the matter of fees, see *Ex parte Mefford* (1883), 25 O. G. 881.

That the arts are necessarily classified as the statute recites them and subordinate classes are constantly arising as the arts advance, which the Patent Office must distinguish, see *Ex parte Herr* (1887), 41 O. G. 463.

That the classification referred to in *Ex parte Herr* was not based on mere Office divisions but on the distinctions recognized in the arts as actually subsisting between inventions, see *Ex parte Sartell* (1888), 42 O. G. 295.

That inventions of different statutory classes cannot be joined, unless inseparable, see *Ex parte Herr* (1887), 41 O. G. 463; *Ex parte Blythe* (1884), 30 O. G. 1321.

That dependent inventions may be joined though the Office classification must give way, see *Ex parte Mefford* (1883), 25 O. G. 881.

That no inflexible rule of joinder is possible, see *Ex parte Young* (1885), 33 O. G. 1390.

§ 470. ¹ In *Densmore v. Schofield* (1868), 4 Fisher, 148, Swayne, J. : (154) “Now, undoubtedly, independent things, separable and separate things, where any combination arises, provided they be cognate, relate to the same invention, and have relation to the same subject, the same object to be accomplished, — undoubtedly these separate claims can be made in the same patent. If they have no such tie of connection as I have mentioned, if they are for separate and entirely different things, then the patent would be void, because it attempted to unite what cannot be united; but if they be connected by a common tie, a common object or purpose, then undoubtedly these different claims can be united in one and the same patent.”

In *Hogg v. Emerson* (1850), 11 How. 587, Woodbury, J. : (606) “It is well settled . . . that a patent for more than one invention is not void if they are connected in their design and operation.”

In *Wyeth v. Stone* (1840), 1 Story, 273, Story, J. : (287) “But it has been said that if each of the machines patented is independent of the other, then separate patents should have been taken out for each; and that they cannot both be joined in one and the same patent; and so there is a fatal defect in the plaintiff's title. And for this position

not necessary that this common and connected use should be the sole use to which any of these inventions can be applied,

the doctrine stated in *Barrott v. Hall* (1 Mason R. 473), and *Evans v. Eaton* (3 Wheat. R. 454, 506), is relied on. I agree that, under the general patent acts, if two machines are patented which are wholly independent of each other, and distinct inventions for unconnected objects, then the objection will lie in its full force, and be fatal. The same rule would apply to a patent for several distinct improvements upon different machines, having no common object or connected operation. For, if different inventions might be joined in the same patent for entirely different purposes and objects, the patentee would be at liberty to join as many as he might choose, at his own mere pleasure, in one patent, which seems to be inconsistent with the language of the patent acts, which speak of the thing patented, and not of the things patented, and of a patent for an invention, and not of a patent for inventions; and they direct a specific sum to be paid for each patent. Besides, there would arise great difficulty in applying the doctrines of the common law to such cases. Suppose one or more of the supposed inventions was not new, would the patent at the common law be void *in toto*, or only as to that invention, and good for the rest? Take the case of a patent for ten different machines, each applicable to an entirely different object, — one to saw wood, another to spin cotton, another to print goods, another to make paper, and so on; if any one of these machines were not the invention of the patentee, or were in public use, or were dedicated to the public before the patent was granted, upon the doctrines of the common law the patent would be broader than the invention, and then the consideration therefor would fail, and the patent be void for the whole. But if such distinct inventions could be lawfully united in one patent, the doctrine would lead to consequences most perilous and injurious to the patentee; for, if any one of them were known before, or the patent as to one was void, by innocent mistake or by priority of invention, that would take away from him the title to all the others, which were unquestionably his own exclusive inventions. On the other hand, if the doctrine were relaxed, great inconvenience and even confusion might arise to the public, not only from the difficulty of distinguishing between the different inventions stated in the patent and specification, but also of guarding themselves against fraud and imposition by the patentee, in including doubtful claims under cover of others which were entirely well founded. In construing statutes upon such a subject, these considerations are entitled to no small weight. At least, they show that there is no ground, founded in public policy or in private right, which calls for any expanded meaning of the very words of the statute; and that to construe them literally is to construe them wisely. It is plain, also, that the act of 1837, ch. 45, in the ninth section, contemplated the rule of the common law as being then in full force; and, therefore, it seeks to mitigate it, and provides, 'that whenever, by mistake, accident, or inadvertence, and without any 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 invented' (not of different things invented) '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 good and valid for so much of the invention or dis-

nor that it be their ordinary use, nor even that they should ever have been thus employed. 'Their capacity for such use is

covery' (not inventions or discoveries) '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.' This language manifestly points throughout to a definite and single invention, as the 'thing patented,' and does not even suppose that one patent could lawfully include divers distinct and independent inventions, having no common connection with each other, nor any common purpose. It may, therefore, fairly be deemed a legislative recognition and adoption of the general rule of law in cases not within the exceptive provision of the act of 1837. And this is what I understand to have been intended by the court in the language used in *Barrett v. Hall* (1 Mason, 447, 475, 478). It was there said (p. 475) that 'a patent under the general patent act cannot embrace various distinct improvements and inventions; but in such a case the party must take out separate patents. If the patentee has invented certain improved machines, which are capable of a distinct operation, and has also invented a combination of these machines to produce a connected result, the same patent cannot at once be for the combination, and for each of the improved machines; for the inventions are as distinct as if the subjects were entirely different.' And again (p. 478), 'If the patent could be construed as a patent for each of the machines severally, as well as for the combination, then it would be void, because two separate inventions cannot be patented in one patent.' It is obvious, construing this language with reference to the case actually before the court, that the court were treating of a case where each of the patented machines

might singly have a distinct and appropriate use and purpose, unconnected with any common purpose, and therefore each was a different invention. In *Moody v. Fiske* (2 Mason, 112, 119), the judge alluded still more closely to the distinction, and said: 'I wish it to be understood in this opinion that though several distinct improvements in one machine may be united in one patent, [yet] it does not follow that several improvements in two different machines, *having distinct* and independent operations, can be so included; much less that the same patent may be for a combination of different machines and for distinct improvements in each.' It is perhaps impossible to use any general language in cases of this sort, standing almost upon the metaphysics of the law, without some danger of its being found susceptible of an interpretation beyond that which was then in the mind of the court. The case intended to be put in each of these cases was of two different machines, each applicable to a distinct object and purpose, and not connected together for any common object or purpose. And, understood in this way, it seems to me that no reasonable objection lies against the doctrine. Construing, then, the present patent to be a patent for each machine, as a distinct and independent invention, but for the same common purpose and auxiliary to the same common end, I do not perceive any just foundation for the objection made to it. If one patent may be taken for different and distinct improvements made in a single machine, which cannot well be doubted or denied, how is that case distinguishable in principle from the present? Here there are two machines, each of which is or may be justly auxiliary to produce the same general result, and each is applied to the same

sufficient to entitle their inventor to embrace them in a single patent, since when contemplated as co-operating toward this common end they may be properly regarded as parts of one invention. But separate and distinct inventions, not capable of such connected use, cannot be joined in the same patent.² Their design and operation being independent of each other there is no point of view from which they can be considered as one invention; and patents embracing two or more such inventions will not be sustained.

common purpose. Why then may not each be deemed a part or improvement of the same invention? Suppose the patentee had invented two distinct and different machines, each of which would accomplish the same end, why may he not unite both in one patent, and say, I deem each equally useful and equally new; but, under certain circumstances, the one may, in a given case, be preferable to the other? There is a clause in the Patent Acts which requires that the inventor, in his specification or description of his invention, should '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.' Now this would seem clearly to show that he might lawfully unite in one patent all the modes in which he contemplated the application of his invention, and all the different sorts of machinery or modifications of machinery by which or to which it might be applied; and if each were new there would seem to be no just ground of objection to his patent reaching them all. *A fortiori*, this rule would seem to be applicable where each of the machines is but an improvement or invention conducing to the accomplishment of one and the same general end." 2 Robb, 23 (37).

That two related and auxiliary inven-

tions may be joined in the same patent, see *McComb v. Brodie* (1872), 1 Woods, 153; 2 O. G. 117; 5 Fisher, 384; *Lee v. Blandy* (1860), 2 Fisher, 89; 1 Bond, 361; *Hogg v. Emerson* (1848), 6 How. 437; 2 Robb, 655.

That several inventions which may be, though they are not, used together may be joined, see *Emerson v. Hogg* (1845), 2 Blatch. 1.

That inventions appropriate for use in the same article for a common purpose of making the article may be joined, see *Maxheimer v. Meyer* (1881), 20 O. G. 1162; 20 Blatch. 17; 9 Fed. Rep. 460.

That related inventions, if invented by different inventors, cannot be joined, see *Potter v. Wilson* (1860), 2 Fisher, 102.

² That separate and independent inventions cannot be joined in one patent either under the law or the rules of the Patent Office, see *Ex parte Heginbotham* (1875), 8 O. G. 237.

That distinct and separate inventions, not connected in design and operation, cannot be joined, see *Sessions v. Romadka* (1884), 21 Fed. Rep. 124; 28 O. G. 721.

That a joinder of separate and distinct but not independent inventions is proper, see *Mosler Safe & Lock Co. v. Mosler* (1885), 31 O. G. 1689; 22 Fed. Rep. 901.

§ 471. Joinder of Inventions : Rule in the Patent Office.

The general rule established in the Patent Office by the regulations and decisions of successive Commissioners permits the joinder of distinct inventions in an application where one of such inventions is dependent on the other and where they thus mutually contribute to produce a single result.¹

§ 471. ¹ In *Ex parte Young* (1885), 33 O. G. 1390, Montgomery, Com. : (1391) "All will agree that an application should not ordinarily embrace matters which belong to absolutely distinct, independent, and unconnected official classes or sub-classes where the inventions involved are separate, independent, and not connected together in their nature, design, or operation, but that in such cases a division should undoubtedly be insisted upon. The first inquiry, therefore, should be as to whether or not the inventions, if there be more than one included in the application, can reasonably and properly be said to be independent inventions — *separate* inventions. If they are so independent and separate, they should not be joined, and a division should be called for. If they are not so independent and separate, but are only distinct, but still 'kindred and auxiliary,' or connected in their design and operation, or in their nature or operation connected together, then ordinarily a division should not be required."

That distinct inventions can be joined if one is dependent on the other, see *Ex parte Hogan* (1879), 16 O. G. 907.

That distinct inventions are not necessarily independent, see *Ex parte Young* (1885), 33 O. G. 1390.

That devices subserving a common end and contributing to a unitary result may be joined, see *Ex parte Sol Kuh* (1876), 10 O. G. 587 ; *Ex parte Clinton & Knowlton* (1876), 9 O. G. 249 ; *Ex parte Jopling* (1875), 8 O. G. 1032.

That devices adapted to each other,

if belonging to the same class and used to serve a common end, may be joined, see *Ex parte Noyes* (1875), 8 O. G. 818.

That where the parts of an invention are intimately connected, and co-operate in the result, they may be joined, see *Ex parte Fresco* (1880), 17 O. G. 1095.

That when devices, in their nature distinct, form a complete set which operate together, they may be joined, see *Ex parte Gokey* (1878), 15 O. G. 295.

That connected inventions may be joined, though a separate foreign patent has been granted for each, see *Ex parte Unsworth* (1879), 15 O. G. 882.

That no joinder is permitted in the Patent Office unless the inventions directly act in producing a resultant operation due to all the inventions, see *Ex parte Herr* (1887), 41 O. G. 463.

That it is for the Patent Office to judge whether inventions are separate and distinct, see *Ex parte Bancroft* (1881), 20 O. G. 1893.

That separate and independent inventions cannot be joined, see *Ex parte Young* (1885), 33 O. G. 1390 ; *Ex parte Van Matteson* (1883), 24 O. G. 389 ; *Ex parte Bancroft* (1881), 20 O. G. 1893 ; *Ex parte Hogan* (1879), 16 O. G. 907 ; *Ex parte Law* (1877), 12 O. G. 940 ; *Ex parte Howland* (1877), 12 O. G. 889 ; *Ex parte Sol Kuh* (1876), 10 O. G. 587 ; *Ex parte Elbers* (1875), 12 O. G. 2.

That inventions which do not co-operate, or depend on each other for their operation, cannot be joined, see

Since in these cases the dependent invention cannot be contemplated by the mind as complete and practically operative unless in connection with the other, and cannot be examined and passed upon by the Patent Office without inquiring into and determining its limits with respect to the other, their joinder is not inconsistent with the division of duties in the Office, though the spirit of its regulations, as well as of the law itself, still demands a separate patent and a separate application for each invention. In judging of inventions with reference to this general rule, their dependency or independency is determined by the scope and relation of the concrete inventions, not by the unity or diversity of the ideas of means as they were developed in the mind of the inventor.² That the inventions pertain to the same subject, or belong to the same genus, or are by nature adapted to a common use should

Ex parte Dieterich (1877), 11 O. G. 195.

That inventions which co-operate neither in function nor result cannot be joined, see *Ex parte* Westcott (1876), 10 O. G. 546.

That independent inventions, whether arts or instruments, cannot be joined, see *Ex parte* McDougall (1880), 18 O. G. 130.

In examining the foregoing cases, or any others upon this subject, it should be borne in mind that inventions are here regarded as "inseparable" whenever either one of them is necessarily dependent on the other. A product which can be created only by a specific process is "inseparable" from that process, although the process, being capable of an application which does not result in that product, is not "inseparable" therefrom. An apparatus which has no other use than in performing a certain art may also be "inseparable" from that art, while the art itself may be entirely separable from the apparatus and as easily performed by many others. "Inseparability" or "dependence," as a ground of joinder,

may thus be predicable of either or both of the conjoined inventions, — the invention being single for the purposes of an application or a patent whenever any of its component or subordinate or resultant arts or instruments could not exist as operative means without the others. This limitation of "inseparability" serves to reconcile with each other all the discordant positions which, by their too comprehensive language, the decisions appear to have maintained.

² In *Ex parte* Murray (1873), 3 O. G. 659, Leggett, Com. : (660) "It might be supposed, because the inception and perfection of a process and the product to be treated and improved by it, or of a machine and its product, are often conjoined in the mind of the inventor, that in this is to be found a reason why the two ought to be regarded as constituting one subject of invention to be embraced in a single patent. But this is not the proper criterion by which to judge of them. The inventions are to be contemplated when completed, and if they are then distinct, it is immaterial how intimately they may have been blended in their production."

any one desire so to employ them, does not constitute such dependence as to justify their joinder.³ But where the ultimate end for which one was created cannot be reached without the employment of the other, or where the operation of the one results in the production of the other, or where the use of one involves the concurrent or co-operating use of all the rest, or where one is generic and the other a particular species of that genus,⁴ this dependence exists and the inventions may be joined.

³ That distinct inventions cannot be joined though they pertain to the same things, see *Ex parte Van Matteson* (1883), 24 O. G. 389; *Ex parte Hamilton* (1877), 13 O. G. 122.

That distinct inventions cannot be joined, though they belong to the same genus, see *Ex parte Stow* (1873), 3 O. G. 322.

That the capability of use by application to some outside article does not warrant a joinder where there is no mutual dependence and intercommunication, see *Ex parte Law* (1877), 12 O. G. 940.

⁴ In *Ex parte Kent* (1880), 17 O. G. 686, Doolittle, Act. Com. : (686) "It is true that a discoverer of a genus in mechanics is entitled to a Claim in a patent co-extensive with the genus, and to which all subsequent Claims for species of that genus must be subordinate. As each genus, however, constitutes a separate invention, but one can be claimed in the same application. A genus is defined as 'a precisely defined and exactly divided class,' and as 'an assemblage of species possessing certain characteristics in common,' but not as including different classes of objects having simply general resemblances and functions; and in a Claim for a genus those common characteristics must be distinctly pointed out. . . . In addition to a generic Claim, one who has invented the genus may, under the established practice of the Office, claim a

particular species illustrative or typical of the genus."

In *Ex parte Kook* (1870), 16 O. G. 543, Paine, Com. : (544) "While it is easy to distinguish theoretically between those cases in which several different forms constitute different species of one genus and those in which they constitute only a single species, the practical discrimination between the two classes of cases is not always easy. The principle is this : When the different forms are such that the substitution of one for another involves invention, the differences are patentable, and the several forms constitute different species of the genus, all subject to one generic patent, but each legally patentable in a distinct and specific patent. On the other hand, when the substitution of one for the other involves no invention, but only mechanical skill, the differences are not patentable, and the forms do not constitute several species of the genus, but are all modifications of a single species."

In *Ex parte Howland* (1877), 12 O. G. 889, Doolittle, Act. Com. : (889) "It may be stated, in brief, that whenever a generic Claim can be predicated which is good in view of the state of the art, and which will include the modifications or specific devices described or exhibited in the drawings, then these may all be retained in a single application; for it is manifest, from the fact that the Claim applies with equal apti-

§ 472. Joinder of Inventions: Combinations: Sub-combinations: Elements.

Out of the application of these general rules to the various classes of inventions have grown certain special rules by which the joinder of two or more inventions of the same class or of different classes is also governed. Before discussing those special rules, however, a peculiar doctrine relating to combinations, which are found in all these classes, may properly be stated. A combination, its sub-combinations, and the elements of which each sub-combination is composed are dependent inventions whenever such elements and sub-combinations are considered in reference to the principal combination in which all unite. Although this principal combination is a true invention, distinct in law as well as in fact from all the subordinate inventions which enter into it, no idea of it can be formed in the mind, no embodiment of that idea can be made practically operative in the arts, and no examination as to its novelty or utility can take place in the Patent Office, without embracing in this idea, in its embodiment, and in this examination each of the elements and sub-combinations of which it consists. Hence, whenever any of these sub-combinations or their elements have been invented by the inventor of the principal combination and have not been previously patented in this country, they may be joined in one application

tude to each, that there are generic features of identity which indicate the same basis of invention. On the other hand, where no Claim of the character indicated can be maintained, it is equally true that there is such diversity as will require a division of the application; this restriction being pursued until the matter retained in any single case can be safely said to relate to but one invention, or, in other words, can be contained in the broadest patentable Claim that is capable of being drawn to it."

Further, that a generic invention and one species under the genus may be joined, see *Ex parte Heaton* (1879), 15 O. G. 1054; *Ex parte Smith* (1879),

16 O. G. 630; *Ex parte Cowper* (1879), 16 O. G. 499.

That two or more distinct species under the same genus cannot be joined, see *Ex parte Ewart* (1880), 17 O. G. 448; *Ex parte Heaton* (1879), 15 O. G. 1054; *Ex parte Dinkelbilher* (1879), 16 O. G. 810; *Ex parte Cowper* (1879), 16 O. G. 499; *Ex parte Morrison* (1879), 16 O. G. 359.

That two distinct species under the same genus, if requiring different inventive acts, cannot be joined, though all will be covered by a patent for the genus, see *Ex parte Kook* (1879), 16 O. G. 543.

For an excellent discussion of joinder and kindred subjects, see *Ex parte Herr*, (1887), 41 O. G. 463.

with the principal combination.¹ And this is equally true whether these elements and sub-combinations are, in their own nature as separately considered, similar or dissimilar to each other either in name, in class, or in mode of operation. This doctrine applies, however, only to cases where the principal combination is itself the subject-matter of the application. It is this combination which constitutes the link between the different sub-combinations and their elements, and thus forms the ground of their dependence on each other. Apart from this combination these subordinate members may or may not be wholly independent of one another, and may be joined or not joined according to the rules which govern simple inventions of their peculiar class.² Different combinations of the same group of elements, combinations of one or more

§ 472. ¹ In *Stevens v. Pritchard* (1876), 2 Bann. & A. 390, Clifford, J. : (390) "Cases arise where a patentee, having invented a new and useful combination, consisting of several elements, which in combination compose an organized machine, also claims to have invented new and useful inventions, consisting of fewer members of the same elements ; and in such cases the law is well settled that, if the several combinations are new and useful, and will severally produce new and useful results, the inventor is entitled to a patent for the several combinations, provided he complies with the requirements of the patent act, and files in the Patent Office a written description of each of the alleged new and useful combinations, and of the manner of making, constructing, and using the several inventions. He may, if he sees fit, give the description of the several combinations in one specification, and in that event he can secure the full benefit of the exclusive right to each of the several inventions by separate Claims, referring to the specification for the description of the inventions, without the necessity of filing separate applications for each of the inventions. Separate descriptions of the respective

inventions in one application are as good as if made in several applications ; but the Claims must be separate, and it would follow that if the patentee, by inadvertence, accident, or mistake, should fail to claim any one of the described combinations, he might surrender the original patent, and have a re-issue not only for the combinations claimed in the original specification, but for any which were so omitted in the Claims of the original patent." 4 Clifford, 417 (418); 10 O. G. 505 (505).

See also *Banks v. Snediker* (1880), 17 O. G. 508 ; *Gill v. Wells* (1874), 22 Wall. 1 ; 6 O. G. 881.

That the elements of a combination may be joined with it unless they have become known in the arts as separate inventions and possess utility in other relations, see *Ex parte Sartell* (1888), 42 O. G. 295.

That elements already in general use in other connections cannot be joined with the combination, see *Ex parte La Borde* (1888), 44 O. G. 700.

² That aggregated devices cannot be joined unless the joinder would be proper when they are considered as distinct inventions, see *Ex parte Cardwell* (1878), 15 O. G. 293.

elements with several different groups of additional elements,³ a single element and several different combinations into which it enters, a combination and distinct improvements in its different elements not affecting the operation of the combination as a whole, one improvement in one element and another improvement in a different element,⁴ — all these are also, for the same reason, outside this peculiar doctrine. An application in which such a joinder should be made would embrace no separate subject-matter which could bring them into relations of dependence. Whenever, therefore, they are capable of being joined in any application which does not embrace the principal combination, it must be on the ground that they are in their own nature dependent on each other and mutually contribute to produce a single result, — a state of facts which allows their joinder under the general rule.

§ 473. Joinder of Inventions : Arts : Apparatus : Product.

The special rules which govern the joinder of arts or processes with each other or with related inventions of a different class, are more stringent in the Patent Office than in the courts. The decisions of the courts permit two processes to be covered by one patent when they are so related to each other that they are capable of being used for the attainment of a common end. They also allow a process to be embraced in the same patent with the apparatus by which it is performed and the product in which it results, where all originate in the inventive genius of the same inventor, although the process, the apparatus, and the product are so far separable from each other that the process might be otherwise performed, the apparatus otherwise employed, and the product otherwise produced.¹ But in the Patent Office arts cannot be

³ That different combinations of the same elements cannot be joined, nor combinations of the same invention with different elements, see *Ex parte* Shepard (1872), 3 O. G. 522.

⁴ See § 478 and notes, *post*.

§ 473. ¹ That the statute allows the joinder of Claims for an art and its apparatus, see *Ex parte* Young (1885), 33 O. G. 1390.

That a Claim for a process cannot be joined with a Claim for a machine where the process consists in the operation of the machine, there being in such case but one invention, viz: the machine, see *Gage v. Kellogg* (1885), 23 Fed. Rep. 891 ; 32 O. G. 381.

In *United States v. Butterworth* (1884) 27 O. G. 717, it is doubted whether the process performed by apparatus can be

joined merely because they relate to the same subject, or can be used for the promotion of a single ultimate result. Either, one must be in its own nature dependent on the other, or taken together they must constitute a combination-process which is also made the subject-matter of the application.² Nor can a process be joined with the apparatus that performs it,³ nor

patented as a separate invention from the apparatus. This doubt must be solved in the affirmative, if the process can be performed by other apparatus or the apparatus can be used for other purposes; in the negative, if they are so related that the process is the function of this apparatus and of this apparatus only.

That one patent may cover the process and another the apparatus, see *Philips v. Kochert* (1887), 40 O. G. 1341; 31 Fed. Rep. 39; *Tilghman v. Proctor* (1880), 102 U. S. 707; 19 O. G. 859; *Cochrane v. Deener* (1876) 94 U. S. 780; 11 O. G. 687; *Corning v. Burden* (1853), 15 How. 252.

That a process and its product may be joined, see *Sewall v. Jones* (1875), 91 U. S. 171; 9 O. G. 47; *Merrill v. Yeomans* (1874), 5 O. G. 267; *Holmes*, 331; 1 Bann. & A. 47; *Goodyear v. Providence Rubber Co.* (1864), 2 Fisher, 499; 2 Clifford, 351.

That a process and its product may be joined if the specification shows that the inventor had both results in his mind, see *Welling v. Rubber Coated Harness Trimming Co.* (1875), 2 Bann. & A. 1; 7 O. G. 608.

That if a process and product are joined each must be fully described, see *Kelleher v. Darling* (1878), 4 Clifford, 424; 14 O. G. 673; 3 Bann. & A. 438.

That processes and their products are to be joined or not as the Patent Office may decide, see *Goodyear v. Wait* (1867), 3 Fisher, 242; 5 Blatch. 468.

² In *Ex parte McDougall* (1880), 18 O. G. 130, Marble, Com. : (131) "The rule that several distinct inventions cannot be included in a single applica-

tion is a well-settled one, and is alike applicable whether such inventions be improvements in processes or in machinery. . . . Each of the several 'acts' of 'the series of acts' constituting the process may be capable of performing separately its own peculiar function, and may be used independently of the others; but if together they co-act in producing the final result they may be joined in a single application. In such a case a Claim can be made to the process as an entirety, and separate Claims can also be made to the sub-processes which go to make up the same. So, also, where one has discovered that a desired result can be attained by a process consisting of a series of steps or acts, and that certain of the steps in such process may be replaced by others which will operate in an equivalent manner in attaining the same end, these several modifications can be embraced in one application, for they cannot be regarded as distinct inventions. In such case the applicant would be entitled to a broad or generic Claim, which would include all the modifications, and would also be allowed to claim separately any one of these modifications or species."

That several processes cannot be joined merely because they relate to the same subject, see *Ex parte McDougall* (1880), 18 O. G. 130.

³ That a process and its apparatus cannot be joined, see *Ex parte Herr* (1887), 41 O. G. 463.

That the process and the apparatus that performs it may be joined, though other apparatus will perform it, if the apparatus is inseparable from the process

either of these with the product in which they result, unless they are to such an extent inseparable that the existence of some one of them is dependent upon that of the others.⁴

and cannot be used except in performing the process, see *Ex parte Tyne* (1880), 17 O. G. 56.

That a process, the apparatus, and the product can be joined if inseparable, not otherwise, see *Ex parte Dailey* (1877), 13 O. G. 228.

In *Ex parte Simonds* (1888) 44 O. G. 445, it is held that where the process and the apparatus are inseparable the former must be the mere function of the latter. This is true where the process can be performed only by the apparatus in question, not where other apparatus can be employed in the process, although the apparatus in question, being capable of no other use than in this process, may be truly inseparable therefrom.

That an art and its apparatus cannot be joined in one patent, being separable inventions wherever the art is not the mere function of the apparatus, see *Ex parte Blythe* (1884), 30 O. G. 1321. But see preceding case and remarks.

Where a process can be performed by different apparatus it is a separate patentable entity from the apparatus which performs it, and therefore must be separately patentable. But it does not follow from this that if any one apparatus can be used for no other purpose than the performance of this process, the process is the mere function of such apparatus, and consequently not a patentable art. Every process may be regarded as a function in its relation to the apparatus which performs it, though it be a means in its relation to the object acted on, and where it is capable of existence apart from one specific apparatus, *i. e.* where it can be performed by various apparatus, it is a separately patentable invention. But an apparatus

which can do nothing except perform a specific process is inseparable from that process, though the process may not be inseparable from the apparatus; and if the process and apparatus are both new inventions they may be joined in one application, not on the ground that the process is the function of the apparatus, but because the apparatus cannot be invented, examined, nor adjudged apart from the single process it performs.

⁴ In *Ex parte Tyne* (1880), 17 O. G. 56, Doolittle, Com. : (56) "It is a settled practice of the Office that a process and its product or a machine and its product may be united in the same application and patent when the product is the necessary result of the process or machine, and can only be produced in that way, or where distinct machines are associated and are necessary to produce a single result. The connection, in all cases, between the means and result must be inseparable. *Ex parte Cobb*, 16 O. G. 175; *Wintherlich*, 16 O. G. 404; 16 O. G. 808. Now a mechanical process, which is only another name for an art, is inseparable from the means by which it is operated. These means may vary, but if the same improvement in the art is produced in substantially the same way the different means are necessarily equivalents, just as two machines producing the same product in substantially the same way are equivalents. And it is no objection to joinder in the same application of inseparably connected distinct inventions that some other equivalent invention may be substituted in place of one of the former."

In *Ex parte Murray* (1873), 3 O. G. 659, Leggett, Com. : (660) "A machine is a distinct subject of invention, and

Thus a process may be joined with its inevitable product or with the apparatus by which alone it can be performed, or a product may be joined with the process on which it depends for its production, or an apparatus with the process whose performance constitutes the sole method in which it can be used; and when either the process or the apparatus or the product are so connected with the other two that its existence as a concrete invention is derived from, or results in, theirs an application for a patent for the former may include the others also.

§ 474. Joinder of Inventions : Machines : Processes : Products.

A similar difference between the Patent Office and the courts obtains in reference to the rules relating to the joinder of machines. Under the decisions of the courts, two machines can be covered by one patent whenever they are kindred in their nature and capable of a connected use toward a common

its product, or the article which it is employed to make, is another distinct subject of invention, if new in itself. They are classified separately in the portfolios of the Office, and require separate examinations, and to grant both in the same patent complicates and increases the work of examiners and greatly augments the danger of making mistakes and improperly duplicating patents. . . . The same is true of a process and the article produced by it. The two are entirely independent. The process may be new and the product old, or both may be new, and yet the product be capable of being produced by other processes. . . . Notwithstanding the precedents which exist, and admitting that such a practice as they indicate, if not strictly correct, is not fatal to the validity of patents, I think the time has come when, leaving out of consideration the perspicuity of the patents themselves, and the revenue to be derived under the law for examinations, a proper classification in the Office, so as to facilitate examinations and prevent mis-

takes in the issue of patents, requires that processes, machines, and their products be presented for patent in separate applications."

That a product and process may be joined, see *Ex parte Stow* (1873), 3 O. G. 322.

That where a process and its product are inseparable, and the sub-process and its product are also inseparable, all may be joined, and if these constitute a generic invention, one species under the genus may be added, see *Ex parte Du Motay* (1879), 16 O. G. 1002.

That a process and product cannot be joined unless inseparable, see *Ex parte O'Neill* (1879), 16 O. G. 1049.

That where a process and product are inseparable they should be joined, see *Ex parte Young* (1885), 33 O. G. 1390; *Ex parte O'Neill* (1879), 16 O. G. 1049.

That a process and a product which requires another process to complete it cannot be joined, see *Ex parte Chamberlin* (1874), 6 O. G. 544.

end.¹ Machines and their integral parts, or a machine and the product in which its use results, or a machine and the process it performs, are also proper subjects-matter for a single patent.² The Patent Office rules, however, require a separate application for each machine unless one cannot be contemplated as an operative instrument without the other, or unless they constitute the elements or sub-combinations of a principal machine which is also the subject-matter of the application.³ A machine and its product, a machine and its process, or a machine with both its process and its product, may be joined when either one cannot exist as a concrete and practical invention without the others.⁴

§ 474. ¹ That two distinct machines cannot be joined, see *Root v. Ball* (1846), 4 McLean, 177 ; 2 Robb, 513.

That machines capable of a common use may be joined, see *Wyeth v. Stone* (1840), 1 Story, 273 ; 2 Robb, 23.

² That a machine and its integral parts may be joined, see *Wheeler v. McCormick* (1873), 4 O. G. 692 ; 11 Blatch. 334 ; 6 Fisher, 551 ; *Foss v. Herbert* (1856), 1 Bissell, 121 ; 2 Fisher, 31.

That the parts may be separately patented, see *Jones v. Sewall* (1873), 3 O. G. 630 ; 6 Fisher, 343 ; 3 Clifford, 563 ; *Wheeler v. McCormick* (1873), 4 O. G. 692 ; 11 Blatch. 334 ; 6 Fisher, 551.

That if the parts are separately patented, each patent may describe the whole, see *McMillin v. Rees* (1880), 1 Fed. Rep. 722 ; 17 O. G. 1222 ; 5 Bann. & A. 269.

That where the product of a machine is new it may be claimed in a patent for the machine, see *Excelsior Needle Co. v. Union Needle Co.* (1885), 32 Fed. Rep. 221.

That a machine, its process, and product are separately patentable, see *McKay v. Dibert* (1881), 19 O. G. 1351 ; 5 Fed. Rep. 587.

That a machine having been pat-

ented, its process and product may be separately patented at any subsequent period unless barred by two years' public use, see *McKay v. Dibert* (1881), 19 O. G. 1351 ; 5 Fed. Rep. 587. But see *McKay v. Jackman* (1882), 12 Fed. Rep. 615 ; 20 Blatch. 466 ; 22 O. G. 85.

³ That subordinate devices may be joined with the principal device, see *Ex parte Bigelow* (1878), 13 O. G. 913.

That all parts of a machine which co-operate to produce a single result may be joined, see *Ex parte Cauhape* (1880), 17 O. G. 327.

That where two machines together produce a result which they could not separately produce they may be joined, see *Burke v. Partridge* (1878), 58 N. H. 349 ; *Ex parte Lones* (1873), 4 O. G. 582.

That machines used as elements of a combination may be joined, see *Ex parte Holub* (1880), 17 O. G. 854 ; *Ex parte Shippen* (1875), 8 O. G. 727.

⁴ In *Ex parte Bancroft* (1881), 20 O. G. 1893, Marble, Com. : (1894) " Various opinions have been expressed by my predecessors as to what constitutes a single invention or discovery. It has been held, and as I think properly, that a die and its product, a pro-

§ 475. Joinder of Inventions: Manufactures: Processes: Apparatus.

The courts permit two manufactures to be joined whenever they are appropriate for use in the same article to serve a common purpose, or when they stand to each other in the relation of a combination and its elements, or when they are the elements of a combination which is itself embraced in the same patent. When any new manufacture is the result of a new process, or is made by a new machine, these also may be joined, although the manufacture might be otherwise produced. The Patent Office, however, applies here the same restrictions as in the cases of a process or machine. One of the two manufactures must be intrinsically dependent upon the other and co-operate with it to some unitary result, or one must represent the genus of which the other is a species, or

cess and its product, the different parts of the same machine co-operating to produce a unitary result, and a machine and its product are respectively sometimes one and the same invention, and therefore may be included in the same patent. The true rule in the latter case, I think, was properly stated by my predecessor, Mr. Commissioner Paine, in the case of *Ex parte Wintherlich* (16 O. G. 404), as follows: 'If the machine and the manufacture are so related that the former cannot operate without producing the latter, and the latter can only be produced by the former, both may be united in one patent; but this is an exception to the general rule, which forbids the joinder of the machine and its product in one application.' The rule above stated also applies in the case of a die and its product or a process and its product. It is *only* when the product can be produced by the die or the process that the die and its product or the process and its product can be considered one and the same invention. In a case where different parts of a machine may be embraced in the same patent they may be

so embraced only because they help to make up one entire whole. In all the cases decided by my predecessors which I have been able to find, the idea of a single invention was always kept in view. Different opinions have been expressed as to what constitutes a single invention; but I have been unable to find that it has been held that two distinct and independent inventions can be embraced in one patent."

That a machine and its product cannot be joined, see *Ex parte Murray* (1873), 3 O. G. 659.

That a machine and its product cannot be joined unless they are inseparable, see *Ex parte Wintherlich* (1879), 16 O. G. 404, 808.

That when the machine and its product are so related that the former cannot operate without producing the latter, and the latter can only be produced by the former, they can be joined, see *Ex parte Wintherlich* (1879), 16 O. G. 404, 808.

That if the product can be made only by the machine they may be joined, see *Ex parte Cobb* (1879), 16 O. G. 175.

they must be members of a combination which is covered by the same application.¹ The manufacture and the process or the machine which produces it must be inseparable as concrete inventions; so that either, on one hand, the manufacture implies the process or machine, or, on the other hand, the process or machine implies the manufacture, and the investigation of the one thus necessarily involves that of the other.²

§ 476. Joinder of Inventions : Compositions : Ingredients : Processes : Apparatus.

Compositions of matter are subject to the same rules as manufactures, both in the Patent Office and before the courts. When wholly independent they cannot be joined; when capable of co-operating to a common end the courts sanction their joinder, although the rules of the Patent Office forbid it unless one is dependent on the other and their co-operation is inevitable.¹ As every composition is a true combination, its elements and sub-combinations may be joined with it in an application for a patent;² and where it stands toward a process or machine in the relation of a product, the courts permit it to be joined with them as in the case of any other product, while the Office limits such a joinder to instances in which the composition and machine or process are inseparable.³

§ 477. Joinder of Inventions : Designs.

Owing to the peculiar character and functions of a design, it is scarcely conceivable that any two designs could be de-

§ 475. ¹ That a manufacture may be joined with a combination into which it enters, see *Ex parte Adams* (1873), 3 O. G. 150.

² See notes in §§ 473, 474, *ante*, as to joinder of product with processes or machines.

§ 476. ¹ That two compositions cannot be joined where one contains all the ingredients of the other with additional ingredients, see *Ex parte Lippincott*

(1879), 16 O. G. 632. This is not true where one composition is a sub-combination of the other.

² That the joinder of Claims for the associations of ingredients in a composition is proper, if they contribute to the single result and are not in different classes, see *Ex parte Hentz* (1884), 26 O. G. 437.

³ See §§ 473, 474, and notes, *ante*, covering joinder of product.

pendent on each other or capable of acting toward a common end except as elements in a combination; and therefore but one separate design can be included in a patent, although where several subordinate designs unite to form a new one the application for a patent for the new design may embrace all the elements and sub-combinations of which it consists.¹ It is equally foreign to the idea of a design that it should be dependent on, or inseparably connected with, those qualities in its object which make that object a new manufacture; and hence although the object be the same it cannot be protected by one patent both as a manufacture and as a design.

§ 478. Joinder of Inventions: Improvements.

The joinder of improvements is also regarded by the Patent Office and the courts from different points of view. Two improvements may be related either directly through the dependence of one upon the other or indirectly through their individual dependence upon the same original invention. Where neither of these relations exists, the improvements cannot be joined. Distinct improvements in distinct arts or machines are as independent of each other as any two inventions of the same class can ever be, and all the rules, both of the Office and the courts, require for each of these a separate

§ 477. ¹ That the joinder of designs is governed by the usual rules, see *Ex parte Patitz* (1883), 25 O. G. 980.

That two independent designs cannot be joined, see *Ex parte Beattie* (1879), 16 O. G. 266.

That the capability of being associated does not make two designs dependent, see *Ex parte Patitz* (1883), 25 O. G. 980.

That a design patent can cover but one design and such modifications of it as do not affect its identity, see *Ex parte Gerard* (1888), 43 O. G. 1240.

That several aggregated designs cannot be joined, see *Ex parte Gerard* (1888), 43 O. G. 1235.

That a joinder of a combination design and its elemental designs is

proper in the courts if the Patent Office will permit it, see *Dobson v. Hartford Carpet Co.* (1885), 114 U. S. 439; 31 O. G. 787; *Ex parte Pope* (1883), 25 O. G. 290; *Ex parte Beattie* (1879), 16 O. G. 267; *Ex parte Rogers* (1878), 13 O. G. 596.

That in the Patent Office the elements of a design cannot be joined with the design, see *Ex parte Gerard* (1888), 43 O. G. 1235.

That in an application for a design a Claim for a separable part of it, which is not a complete design, cannot be inserted, see *Ex parte Pope* (1883), 25 O. G. 290.

That the relation of genus and species does not exist in designs, see *Ex parte Gerard* (1888), 43 O. G. 1240.

application.¹ But two improvements in the same art or machine, though as improvements merely they may be wholly independent of each other, are so connected through the original invention that they are capable of serving a common end, and hence, according to the doctrine of the courts, may be covered by the same patent and joined in the same application.² An improvement in a given art or machine may not,

§ 478. ¹ In *Emerson v. Hogg* (1845), 2 Blatch. 1, Betts, J. : (7) "In *Evans v. Eaton* (3 Wheat. 454, 506), and in *Barrett v. Hall* (1 Mason, 447, 475), doubts are started whether, under the general Patent Law, improvements on different machines can regularly be comprehended in the same patent, so as to give a right to the exclusive use of the several machines separately, as well as a right to the exclusive use of them in combination. But the special statute (6 U. S. Stat. at Large, 70) applicable to the first case furnished a rule in itself, and the doctrine intimated by the court must accordingly be accepted as put hypothetically, and not laid down as a settled principle to govern the construction of specifications. The case of *Barrett v. Hall* attempts a generalization of the doctrines of the Patent Law, and, in the particular now under inquiry, the definition there adopted has no necessary connection with the case decided. Judge Story, in *Moody v. Fiske* (2 Mason, 112, 119), enters a caveat against his reasoning in that case being held to authorize the including in one specification several improvements in separate machines, having distinct and independent operations; much less the claiming in the same patent a combination of different machines; and distinct improvements in each. The suggestions advanced in all these cases were by way of caution, and were probably designed to avoid the conclusion that the court had prejudged or was committed upon that particular

form of the question. No one of the cases demanded a judgment upon the specific point. In *Wyeth v. Stone* (1 Story, 278, 292) the court reviews those cases, and restricts their application to such inventions as are necessarily distinct from each other, and not contemplated to be used in connection, and holds that a patent for several machines, each being a distinct and independent invention, is valid where they have a common purpose and are auxiliary to the same common end. (*Phillips on Pat.* 216, 217; *Pitts v. Whitman*, 2 Story, 609, 620, 621.) The principle seems to be, that the inventions should be capable of being used in connection, and to subserve a common end (*Wyeth v. Stone*, 1 Story, 273, 289, 290), though their actual employment together does not seem to be required to sustain the validity of the patent in which they may be united."

See also *Evans v. Eaton* (1818), 3 Wheat. 454; 1 Robb, 243.

That Claims covering several and distinct improvements relating to one article are not allowed, and all but one may be ordered disclaimed by the court as a condition of granting relief as to the others, see *Sessions v. Romadka* (1884), 28 O. G. 721; 21 Fed. Rep. 124.

² That several improvements on the same original machine may be joined, see *Burke v. Partridge* (1878), 58 N. H. 349; *Lee v. Blandy* (1860), 1 Bond, 361; 2 Fisher, 89; *Adams v. Jones* (1859), 1 Fisher, 527; *Morris v. Barrett* (1859), 1 Fisher, 461; 1 Bond, 254;

however, always be applicable to that original alone, or be useful only in connection with the other improvements which may be made by the same inventor on the same original invention, but may be equally operative for different purposes apart from them. Under the general rules of the Office, such improvements cannot be joined in the same application; a joinder of improvements being forbidden unless one so depends upon the other that they mutually co-operate to produce a given result.³ Distinct and independent improvements in separate parts of the same original invention therefore cannot be joined;⁴ but several improvements in the different elements of a combination affecting the action of the combination as a whole, or improvements which so operate upon each other as to increase their joint efficiency, may be united in one application and be protected by the same patent.⁵

§ 479. Joinder of Inventions: Application of these Rules often Difficult.

Although these various rules are reasonable in theory and clear in statement, their application to practical inventions is often difficult, from the obscurity which may exist in regard to the actual relations of the inventions to each other. Differences of opinion frequently arise between inventors and the Patent Office on this subject; and as the authority of the Office is supreme and finally determines what is a single in-

Pitts v. Whitman (1843), 2 Story, 609; 2 Robb, 189; *Wyeth v. Stone* (1840), 1 Story, 273; 2 Robb, 23; *Moody v. Fiske* (1820), 2 Mason, 112; 1 Robb, 312.

³ That devices, improving a machine as a whole, may be joined, see *Ex parte Clinton* (1876), 9 O. G. 249.

That two or more improvements on a machine, each contributing to the common result, may be joined, see *Ex parte Sergeant* (1876), 9 O. G. 963.

That improvements in the separate parts of a machine cannot be joined unless they co-operate in the new invention, see *Ex parte Gillies* (1876), 10 O. G. 415.

That several improvements in the parts of a device may be joined if they co-operate to improve it as a whole, and the improvements are not distinct subjects of invention or manufacture, see *Ex parte Herr* (1887), 41 O. G. 463.

⁴ That independent improvements on the different parts of a machine cannot be joined, see *Ex parte Van Matteson* (1883), 24 O. G. 389.

⁵ That improvements in the elements of a combination may be joined if the elements co-operate in the original combination, though there are other elements, see *Ex parte Möller* (1879), 16 O. G. 358.

vention and whether or not an attempted joinder is permissible, an application may be found defective on account of an improper joinder, and a patent upon it may be refused. In such cases the inventor may amend his application by striking out such of the inventions as it has been decided cannot be joined with the others, and may then make them the subject-matter of separate applications, inserting into each, where the inventions all relate to a common object, specific disclaimers of the inventions severally covered by the others.¹ When this amendment appears necessary on the face of the original application, it may be ordered before any action on the merits; otherwise, at any time before the final issue of the patent.

SECTION V.

OF THE APPLICATION: THE DESCRIPTION OF THE INVENTION.

§ 480. The Specification: its Importance.

The specification is the most important portion of the application. Not only does it serve as the basis of all the proceedings in the Patent Office and thus determine the right of the inventor to a patent, it also becomes a portion of the patent when granted, and as such fixes and defines the rights of the inventor and the public as against each other. In view of its importance, and in order to secure to it such characteristics as shall enable it to perform its proper functions both before and after the issue of the patent, numerous rules have been established concerning its form and contents which must be strictly observed.¹

§ 479. ¹ That where distinct inventions are embraced in the same application the application must be divided, see *Ex parte* Preston (1880), 17 O. G. 853; *Ex parte* Siemens (1877), 11 O. G. 969.

That on a division of the application disclaimers must be filed with each division, excluding the matter not claimed therein, see *Ex parte* Finch

(1883), 26 O. G. 273. See also § 467, note 2, *ante*.

That a division being once made the excluded matter cannot be reinstated, see *Ex parte* Preston (1880), 17 O. G. 853.

§ 480. ¹ That the rules of the Patent Office assume that all parts of the specification will conform to the statutes and rules, see *Ex parte* Crandall (1886), 35 O. G. 625.

§ 481. **The Specification Sets Forth the Contract between the Public and the Patentee : its Twofold Object.**

The functions of a specification and the propriety of the rules which govern it are evident from the nature of a patent. A patent is a contract between the inventor and the public, by which the inventor, in consideration that the exclusive use of his invention is secured to him for a limited period of time, confers upon the public the knowledge of the invention during that period and an unrestricted right to use it after that period has expired.¹ The public, on the other hand, acting through the government, agree with the inventor that, in consideration of his immediate bestowal upon them of a full knowledge of the invention and of the entire right to use it after the term named in his patent is at an end, they will protect him in its exclusive use during the life of his patent. In this contract resides the whole force and benefit of the patent to both parties. The specification is the instrument in which the terms of these mutual considerations and promises are declared, and on its completeness and accuracy depends the validity and the value of the contract itself. Its object is thus twofold: (1) To place the invention fully within the knowledge of the public; (2) To define the exact limits of that exclusive use which the public has undertaken to protect. All the rules into whose discussion we are now about to enter are intended to secure the accomplishment of these two objects.²

§ 481. ¹ In *Page v. Ferry* (1857), 1 Fisher, 298, Wilkins, J. : (306) "The patent may be considered in the light of a deed from the government, the consideration of which is the invention specified; and the patentee is bound to communicate it, by so full, clear, and exact a description, with drawings and models, that it shall be within the comprehension of the public at the expiration of the patent; for at that period his invention becomes public property. The exclusive privilege is not conferred merely as a reward of genius, and for the encouragement of useful inventions and improvements in arts and manu-

factures, but also embraces the public benefit." See also *Wintermute v. Redington* (1856), 1 Fisher, 239; *Gibson v. Brand* (1842), 1 Web. 627; *Walton v. Potter* (1841), 1 Web. 585.

² In *Tucker v. Tucker Mfg. Co.* (1876), 4 Clifford, 397, Clifford, J. : (400) "Exactitude in the description of an invention is required for three reasons: 1. That the government may know what they have granted, and what will become public property when the term of the monopoly expires; 2. That licensed persons desiring to practise the invention may know during the term how to make, construct, and

§ 482. The Specification : its Two Divisions the Description and the Claim.

Having these two objects to fulfil, a specification is naturally divided into two parts, not wholly independent of each other, but sufficiently distinct to be capable of, and to require, a separate consideration. These two parts are known as the Description, and the Claim.¹ It is the office of the Description to communicate to the public the knowledge of the invention. It is the office of the Claim to define the limits beyond which the public cannot pass without invading the exclusive rights of the inventor. These two parts are not simple repetitions of each other.² While the Description necessarily

use the invention ; 3. That other and subsequent inventors may know what part of the field of invention is unoccupied." 10 O. G. 464 (464); 2 Bann. & A. 401 (403).

See also *Mabie v. Haskell* (1865), 2 Clifford, 507 ; *Forbes v. Barstow Stove Co.* (1864), 2 Clifford, 379 ; *Judson v. Moore* (1860), 1 Bond, 285 ; 1 Fisher, 544 ; *Wayne v. Holmes* (1856), 2 Fisher, 20 ; 1 Bond, 27 ; *Morton v. Middleton* (1863), 1 Cr. S. 3d Series, 725 ; *Hills v. London Gas Light Co.* (1860), 5 H. & N. 312 ; *Holmes v. London & N. W. R. R. Co.* (1852), Macrory, P. C. 13 ; *Neilson v. Thompson* (1841), 1 Web. 278 ; *Hornblower v. Boulton* (1799), 8 T. R. 95 ; 1 Abb. P. C. 98 ; *Arkwright v. Nightingale* (1785), 1 Web. 60 ; 1 Abb. P. C. 24.

§ 482. ¹ That the applicant for a patent must fully describe and exactly claim his actual invention ; and when he has done this the requirements of the law are satisfied, see *Ex parte Skinner* (1881), 19 O. G. 662 ; *Wyeth v. Stone* (1840), 1 Story, 273 ; 2 Robb, 23.

That the primary object of a specification is to describe the invention, see *Aultman v. Holley* (1873), 11 Blatch. 317 ; 6 Fisher, 534 ; 5 O. G. 3.

That both Description and Claims are required in a specification, see *Ex parte Crandall* (1886), 35 O. G. 625.

That whether a Claim can also answer the purpose of a Description is doubtful, see *Smith v. Murray* (1886), 27 Fed. Rep. 69 ; 36 O. G. 1045.

² In *Ex parte Holt* (1884), 29 O. G. 171, Dyrenforth, Act. Com. : (178) "The description of an invention by a specification alone is not now, as formerly, all-sufficient ; but the Description must be supplemented by a specific and well-defined Claim to the part, improvement, or combination which the inventor regards as his property. The aim, end, and purpose of *the specification*, under the present statute, is to *describe* the invention sought to be covered by the patent, and the manner of making, constructing and using the same. The aim, the end, the purpose of *the Claim* is to *point out particularly and distinctly define* the invention to be secured to the individual. The *Claim* is the measure of the patent, and the day has passed when the courts will search through the specification for information which it is the very office of the *Claim* to impart."

The words "description" and "claim" being used in Patent Law not only to denote the two parts of the specification but also in their common acceptation, and the rules applied to them in these different uses being in many respects dissimilar, an endeavor is made in this work to avoid the con-

contains allusions to and delineations of many other arts or instruments besides the real invention, in order to enable the latter to be clearly understood, the Claim states the invention only, enumerating its essential characteristics and excluding everything for which the protection of the patent is not desired, with an implied or express reference to the Description for a fuller explanation of such features of the invention as the brevity of the Claim may leave obscure. The purposes of the two parts being thus distinct, their form and nature will be found to differ in a corresponding manner.

§ 483. **The Description: its Object and General Requisites.**

The Description is intended to render the invention accessible to the public. By this is meant that the knowledge of the invention communicated through the Description must be so complete and accurate that during the life of the patent the scope of the protected invention shall be clearly discernible, and that after the patent has expired the public can make it available for immediate practical use without the further exercise of inventive skill.¹ A Description failing in any respect to accomplish this purpose is defective, and if the defect is incurable the patent based on the specification which embraces it is void.² The rules which have been established by the statutes, the courts, and the Patent Office for securing this completeness and accuracy in the Descrip-

fusion which would otherwise result by beginning the words with a capital letter whenever they are employed in their technical sense, as signifying parts of the specification.

§ 483. ¹ In *Parks v. Booth* (1880), 102 U. S. 96, Clifford, J. : (101) "Inventors . . . are required, before they secure a patent, to deliver a written Description of the improvement, and of the manner and process of making, constructing, and using the same, in such full, clear, and exact terms as to enable one skilled in the art or science to make, construct, and use the invention. . . . Requirements of the kind may be regarded as conditions precedent to the

right of the Commissioner to grant such an application." 17 O. G. 1080 (1090).

See also *Sullivan v. Redfield* (1825), 1 Paine, 441 ; 1 Robb, 477.

That the patent, by its very terms, must confer a useful invention on the public, see *Carr v. Rice* (1856), 1 Fisher, 198 ; Opinion Atty. Gen. (1796), 1 Op. At. Gen. 64.

That the entire invention must be specified in the most unequivocal and unambiguous language, see *Ex parte Williams* (1876), 10 O. G. 748.

² That an imperfect Description makes a patent void, see *Wayne v. Holmes* (1856), 1 Bond, 27 ; 2 Fisher, 20.

tion relate to its substance, or what it must contain, and to its form, or the mode in which what it contains must be expressed. These are now to be examined in detail in their order, — first, in reference to inventions in general; and second, in reference to each of the particular classes of inventions.

§ 484. **The Description must Disclose the Attributes of the Invention.**

According to the statutes, the Description must contain full explanations of three different subjects: the invention itself; the manner of making it; and the mode of putting it to practical use, — a complete knowledge upon all these points being necessary to render the invention available to the public without further experiment or exercise of inventive skill.¹ In describing the invention itself, each of its essential parts must be clearly and exactly delineated, and the relation of each to the others definitely portrayed.² That some are to be found

§ 484. ¹ That the Description must explain the principle of the invention and state the best known mode of constructing and operating it, see *Grier v. Castle* (1883), 17 Fed. Rep. 523; 24 O. G. 1176; *Union Sugar Refinery v. Matthiesson* (1865), 2 Fisher, 600; 3 Clifford, 639; *Page v. Ferry* (1857), 1 Fisher, 298; *Teese v. Phelps* (1855), 1 McAllister, 48; *Thomas v. Welch* (1866), L. R. 1 C. P. 192; *Morgan v. Seaward* (1836), 1 Web. 170; 2 Abb. P. C. 262; *Brunton v. Hawkes* (1821), 4 B. & Ald. 541; 1 Abb. P. C. 336.

That the invention described and claimed must correspond in principle, if not in form, with the actual invention, see *Weir v. North Chicago Rolling Mill Co.* (1883), 23 O. G. 191; 9 Bissell, 508; 14 Fed. Rep. 42.

² That the exact new invention must be described, see *Ex parte Cornell* (1872), 1 O. G. 573.

That the description of the invention varies in definiteness according to its nature, but must be sufficient to inform those skilled in the art, see *Mowry v.*

Whitney (1872), 14 Wall. 620; 1 O. G. 492; 5 Fisher, 494.

That a description of the mode of using an invention is not a description of the invention itself, see *Ex parte Doten* (1877), 12 O. G. 841.

That the description of a result does not describe the means by which it is attained, see *Burrall v. Rumsey* (1877), 13 O. G. 123.

That the Description of an invention, whose utility is dependent on some property of matter, must describe that property, see *Andrews v. Hovey* (1883), 5 McCrary, 181; 16 Fed. Rep. 387; O. G. 1011.

That the patentee is not bound by the qualities of the article described as the result of his process, but by those which actually exist in it when produced, see *Goodyear v. New York Gutta Percha & India Rubber Vulcanite Co.* (1862), 2 Fisher, 312.

That the principle to be explained is the idea of means, not the scientific principle of the invention, see *Eames v. Andrews* (1887), 122 U. S. 40; 39 O. G. 1319; *Andrews v. Cross* (1881), 8 Fed.

in the Description, and others in the drawings or models referred to in the Description, does not satisfy the requirements of this rule. The written Description must be complete in itself, although its language may be illustrated and applied by means of a model or the drawings which accompany it.³ Whatever features of the invention are indispensable to its performance of the functions which it was intended to discharge are to be described in words as accurately as the nature of the case admits; while features not thus indispensable, although in the inventor's mind inextricably connected with the others, may safely be omitted.⁴ Hence details of shape, size, quality, proportion, arrangement, and materials require delineation when essential to the operation of the art or instrument described, but otherwise are superfluous except so far as their mention may become necessary in order to set forth its essential characteristics. Besides this delineation of the parts of the invention and their mutual relations, the state of the art to which it belongs must be sufficiently de-

Rep. 269; 19 Blatch. 294; 19 O. G. 1705; *St. Louis Stamping Co. v. Quinby* (1879), 4 Bann. & A. 192; 16 O. G. 135.

That the theory on which the invention operates need not be explained, see *Eames v. Andrews* (1887), 122 U. S. 40; 39 O. G. 1319.

³ That it is not enough that the invention appears in the drawings, — it must also appear in the written Description and Claim, — see *Gunn v. Savage* (1887), 30 Fed. Rep. 366; *Roemer v. Neumann* (1885), 26 Fed. Rep. 102; *Tinker v. Wilber Eureka Mower & Reaper Mfg. Co.* (1880), 1 Fed. Rep. 138; 5 Bann. & A. 92; *Ex parte Fox* (1812), 1 Web. 431; 1 Abb. P. C. 185. *Contra*, *Poupard v. Fardell* (1869), 18 W. R. 127; *Brunton v. Hawkes* (1820), 1 Carp. P. C. 410; 1 Abb. P. C. 336.

That drawings may show the form and position of parts of the invention where the Description fails to do so, see *Banker v. Bostwick* (1880), 18 O. G. 61; 3 Fed. Rep. 517; 5 Bann. & A. 463.

That drawings cannot supply the place of a written Description to such an extent that a Claim can be construed to cover matter indicated only by the drawings, see *Gunn v. Savage* (1887), 30 Fed. Rep. 366.

That a model showing the invention cannot supply the place of a written Description, see *Barry v. Gugenheim* (1872), 1 O. G. 382; 5 Fisher, 452.

⁴ That the failure to describe an essential element renders the patent useless to the public and void, see *Carr v. Rice* (1856), 1 Fisher, 198.

That the means described must be the essential necessary means, not mere accidental adjuncts, see *Russell v. Dodge* (1876), 93 U. S. 460; 11 O. G. 151.

That a failure to describe an element embraced in the inventor's conception of his invention, but still without which the new machine will work, is not fatal to the patent, see *Carr v. Rice* (1856), 1 Fisher, 198.

scribed to show its real place in the art, and to disclose the precise points in which it differs from all inventions previously known, — thus distinguishing the new matter, to be covered by the patent, from the old which is already in the possession of the public.⁵ When several inventions are joined in one application, the same particularity of description is necessary in regard to each; and where the invention is generic, at least one species of the genus must be delineated in the manner here prescribed.

§ 485. The Description must Disclose the Manner of Making the Invention.

The manner of making the invention is the method by which the idea of means conceived by the inventor is reduced to practice. While this idea, which is the principle of the invention, is a unit and invariable, the modes of its embodiment in the concrete invention may be numerous and, in appearance, very different from each other. The applicant is not required to describe all possible forms in which this principle may be reduced to practice, or even all such forms as he may have himself adopted. These belong to the skill of the mechanic, not the inventor; and having one embodiment before them, the public are presumed to be able to construct such others as they may desire. But one mode of reducing the idea to practical utility must be described, and this must be the best one known to the inventor, since to withhold, for his own use or that of his licensees, a better form than that which he bestows upon the public would be a fraud upon them and render the patent void.¹ This description of the manner of

⁵ That the Description must distinguish the new from the old, see *Grier v. Castle* (1883), 17 Fed. Rep. 523; 24 O. G. 1176; *Sawyer v. Miller* (1882), 12 Fed. Rep. 725; 4 Woods, 472; *Phillips v. Page* (1860), 24 How. 164; *Teese v. Phelps* (1855), 1 McAllister, 48; *Dangerfield v. Jones* (1865), 13 L. T. Rep. n. s. 142; *Newall v. Elliott* (1864), 10 Jur. n. s. 954; *Holmes v. London & N. W. R. R. Co.* (1852), Macrory, P. C. 13; *Crane v.*

Price (1842), 4 M. & G. 580; 1 Web. 393; *Carpenter v. Smith* (1841), 1 Web. 530; *Manton v. Manton* (1815), Dav. P. C. 333; 1 Abb. P. C. 189.

§ 485. ¹ That the specification must describe some practicable method of carrying the invention into effect, see *Ex parte Schoonmaker* (1878), 13 O. G. 595; *Union Sugar Refinery v. Matthiesson* (1865), 2 Fisher, 600; 3 Clifford, 639.

That the specification must describe

making must embrace such a statement of the idea or principle of the invention, and of its application to the materials employed in the practice of the concrete art or the construction of the concrete instrument, that the public, following its directions, may produce from it alone a practically operative invention, performing in the best method known to the inventor the functions which it was intended to discharge.² Abstract or theoretical principles, however, being mere truths of science or speculative methods of accounting for results, need not be mentioned.³ The inventor himself is not required to understand them, nor is an acquaintance with them necessary to enable the public to reap the entire benefits of his invention.

§ 486. The Description must Disclose the Mode of Use of the Invention.

The modes of putting an invention to practical use are also often numerous and varied. They belong to the mechanical rather than the inventive side of the invention, although some mode of use must inevitably be contemplated by the inventor while employed in the development of his idea of means, and must, for the same reasons, be stated to the public in order that their knowledge of the invention, as a practically operative art or instrument, may be complete.¹ But having ex-

the best mode of applying the principle of the invention, see *Grier v. Castle* (1883), 17 Fed. Rep. 523; 24 O. G. 1176.

That to conceal the best mode for the benefit of the inventor and his licensees avoids the patent, see *Dyson v. Danforth* (1865), 4 Fisher, 133.

² That the Description is sufficient if, from it alone, a competent mechanic can construct the invention, see *Wayne v. Holmes* (1856), 2 Fisher, 20; 1 Bond, 27.

That the statement in the Description of each different method of doing a thing must be so clear that it can be done in each way by those skilled in the art, and if any such way is vaguely stated it must be erased, see *Ex parte Howe* (1883), 24 O. G. 1090.

³ That the scientific principle need not be stated, see *Eames v. Andrews* (1887), 122 U. S. 40; 39 O. G. 1319; *Andrews v. Cross* (1881), 19 O. G. 1705; 8 Fed. Rep. 269; 19 Blatch. 294; *St. Louis Stamping Co. v. Quinby* (1879), 4 Bann. & A. 192; 16 O. G. 135; *Woodward v. Dinsmore* (1870), 4 Fisher, 163.

That the reason given by the inventor for the operation of his invention is not conclusive, see *Stow v. Chicago* (1877), 3 Bann. & A. 83; 8 Bissell, 47.

§ 486. ¹ That the Description must disclose a method of putting the invention to practical use, see *American Hide & Leather Splitting & Dressing Mach. Co. v. American Tool & Mach. Co.* (1870), 4 Fisher, 284; *Holmes*, 503;

plained one mode, all other possible modes are assumed to be suggested by it, unless they depend upon the further exercise of inventive skill, in which case they become new and separate inventions.² The mode explained must be the best within the knowledge of the applicant;³ and must be described, not by asserting that a given result can be obtained by using the invention, but by prescribing certain fixed and definite rules of action by following which the given result will be accomplished.⁴

§ 487. **The Description to be Confined to these Three Points.**

To these three subjects the Description ought to be confined. Whatever matters of narration or assertion pass beyond these limits are surplusage, and if they do not render the delineation fatally ambiguous, are at least unnecessary and objectionable. Especially is this true of all expressions praising the art or instrument described, and disparaging competing inventions. The sole object of the Description is to confer knowledge upon the public concerning the intrinsic character of the new device or process and the mode of making it available in practice; and no argument as to its merits, either actual or comparative, can be appropriate in such an instrument.¹

Pitts v. Wemple (1855), 2 Fisher, 10; 1 Bissell, 87; *Felton v. Graves* (1829), 3 C. & P. 611; 1 Abb. P. C. 416; *R. v. Wheeler* (1819), 2 B. & Ald. 345; 1 Abb. P. C. 317.

² That having described one mode others need not be mentioned, see *Pike v. Potter* (1859), 3 Fisher, 55; *Derosne v. Fairie* (1835), 1 Web. 154; 2 Abb. P. C. 78.

³ That the mode described must be the best mode known to the inventor, see *Lorillard v. McDowell* (1877), 11 O. G. 640; 2 Bann. & A. 531; 13 Phila. 461.

That the patent is valid if the invention serves any use, though it will not fulfil all the uses claimed for it in the patent, see *Phillips v. Risser* (1885), 26 Fed. Rep. 308.

⁴ That the Description must not state merely a result but a mode of at-

taining it, see *Burrall v. Rumsey* (1877), 13 O. G. 123.

§ 487. ¹ In *Aultman v. Holley* (1873), 11 Blatch. 317, Woodruff, J.: (325) "The object of a specification is to describe the thing invented, so as to enable a mechanic of ordinary skill to construct it and apply it to practical use; and the Claim declares what the patentee claims as his invention. Beyond this, all essays eulogistic of its utility, and assertions of its capacity, are immaterial and useless." 6 Fisher, 534 (543); 5 O. G. 3 (7).

In *Ex parte Williams* (1872), 1 O. G. 225, Leggett, Com.: (226) "It is proper and desirable that an applicant should briefly, and in a well-condensed form, set forth clearly the present state of the art to which his invention relates; but in doing so he should not ask the

§ 488. The Description is Sufficient if Sufficient for Persons Skilled in the Art.

The language and the methods of statement employed in the description of these three subjects must be such as to place the invention fully in the possession of the public. To render an invention accessible to the public, it is not necessary that it should be so described as to be understood by all the individuals of whom the public is composed. Probably no implement, however simple and however long in use, can be comprehended and applied in practice without some previous knowledge, on the part of him who uses it, as to the end which it is designed to accomplish and the general modes in which such ends must be attained. Every invention is a single step forward in the progress of the industrial arts, and cannot be intelligible except to those who are familiar with the steps already taken and with the object which this new advance is intended to subserve. It would be impossible as well as useless for the inventor, in his application for a patent, to furnish to the general public such a complete knowledge of all past achievements in the arts as would enable them to understand the precise place occupied by his invention, and thus perceive its character, its method of construction, and its mode of use. Each of these arts has its especial votaries, men whose lives are spent in acquiring information concerning the appliances which relate to their own industry, and in putting them in practical operation both for their personal and the public good. The possession of an invention by these artisans is its possession by the public for all beneficial purposes, and the inventor who renders it accessible to them makes it as available to the community at large as, in the nature of things, it could ever be. It is to these persons, skilled in the art to which the invention appertains, that the Description of it in the specification is addressed.¹ The inventor has a right to

Office to indorse his claim to superiority over other inventions by name, nor to disparage patents granted to others. A discussion of the merits or demerits of other patents or inventions in the body of a specification is improper, and should not be indulged by the Office. While

such a discussion may be proper in an argument, it is out of place in a specification. A specification should be descriptive, not argumentative."

§ 488. ¹ In *Plimpton v. Malcolmson* (1876), L. R. 3 Ch. 531, Jessel, M. R.: (568) "Now what is the meaning of it

assume that all those who have recourse to his patent for their knowledge of his invention bring with them such an acquaintance with the state of the art as the ordinary prac-

being a sufficient specification? Upon that there has been a very great deal of authority. Judges have stated it in different ways, no doubt, but I do not think there is much difference in substance. In the first place, it is plain that the specification of a patent is not addressed to people who are ignorant of the subject-matter. It is addressed to people who know something about it. But then there are various kinds of people who know something about it. If it is a mechanical invention, as this is, you have, first of all, scientific mechanics of the first class, — eminent engineers; then you have scientific mechanics of the second class, — managers of great manufactories, great employers of labor, persons who have studied mechanics — not to the same extent as the first class, the scientific engineers, but still to a great extent — for the purpose of conducting manufactories of complicated and unusual machines, and who therefore must have made the subject a matter of very considerable study; and in this class I should include foremen, being men of superior intelligence, who like their masters would be capable of invention, and like the scientific engineers would be able to find out what was meant even from slight hints, and still more from imperfect descriptions, and would be able to supplement, so as to succeed even from a defective description, and even more than that, would be able to correct an erroneous description. That is what I would say of the two first classes, which I will call the scientific classes. The other class consists of the ordinary workman, using that amount of skill and intelligence which is fairly to be expected from him, — not a careless man, but a careful man, though not possessing that great scientific knowl-

edge or power of invention which would enable him by himself, unaided, to supplement a defective description or correct an erroneous description. Now, as I understand, to be a good specification it must be intelligible to the third class I have mentioned, and that is the result of the law. It will be a bad specification if the first two classes only understand it, and if the third class do not. I do not think, when the cases come to be examined, there is really any difference between the judges on this point. Their language differs, but I do not think the cases differ."

In *Mowry v. Whitney* (1871), 14 Wall. 620, Strong, J.: (644) "The specification, then, is to be addressed to those skilled in the art, and is to be comprehensible by them. It may be sufficient, though the unskilled may not be able to gather from it how to use the invention." 5 Fisher, 494 (502); 1 O. G. 492 (495).

That the Description of the invention is addressed to, persons skilled in the art, see *Roberts v. Schreiber* (1880), 5 Bann. & A. 491; 18 O. G. 125; 2 Fed. Rep. 855; *Klein v. Russell* (1873), 19 Wall. 433; *Woodward v. Morrison* (1872), 5 Fisher, 357; 2 O. G. 120; *Holmes*, 124; *Tilghman v. Mitchell* (1871), 4 Fisher, 599; 9 Blatch. 1; *Whitney v. Mowry* (1867), 3 Fisher, 157; 2 Bond, 45; *Forbes v. Barstow Stove Co.* (1864), 2 Clifford, 379.

That if the Description is sufficient to enable those skilled in the art to make and use the invention the requirement of the law is satisfied, see *Loom Co. v. Higgins* (1882), 105 U. S. 580; 21 O. G. 2031; *Roberts v. Schreiber* (1880), 5 Bann. & A. 491; 18 O. G. 125; 2 Fed. Rep. 855; *St. Louis Stamping Co. v. Quinby* (1879), 16 O. G. 135; 4

tical workmen in that art possess;³ and if he affords to them such information as enables them to practise his invention, he satisfies all the requirements of the law, although to the unskilled his statements may be wholly unintelligible.

Bann. & A. 192; *Calkins v. Bertraud* (1875), 6 Bissell, 494; 9 O. G. 795; 2 Bann. & A. 215; *Ives v. Hamilton* (1875), 92 U. S. 426; 10 O. G. 336; *Dorsey Harvester Rake Co. v. Marsh* (1873), 6 Fisher, 387; *Singer v. Walmsley* (1860), 1 Fisher, 558; *Judson v. Moore* (1859), 1 Bond, 285; 1 Fisher, 544; *Wayne v. Holmes* (1856), 1 Bond, 27; 2 Fisher, 20; *Allen v. Hunter* (1855), 6 McLean, 303; *Hogg v. Emerson* (1850), 11 How. 587; *Brooks v. Jenkins* (1843), 3 McLean, 250; 2 Robb, 118; *Whitney v. Emmott* (1831), Baldwin, 303; 1 Robb, 567; *Heath v. Unwin* (1852), 2 Web. 236; *Neilson v. Harford* (1841), 1 Web. 295; *Bickford v. Skewes* (1841), 1 Web. 214; *Elliott v. Aston* (1840), 1 Web. 222; *Galloway v. Blerden* (1839), 1 Web. 521; *Morgan v. Seaward* (1833), 1 Web. 170; 2 Abb. P. C. 262; *Crossley v. Beverly* (1829), 1 Web. 106; 1 Abb. P. C. 409; *Sturtz v. De La Rue* (1828), 5 Russ. 322; 1 Web. 83; 1 Abb. P. C. 399; *Manton v. Manton* (1815), Dav. P. C. 333; 1 Abb. P. C. 189; *Harmar v. Playne* (1809), Dav. P. C. 311; 11 East, 101; 1 Abb. P. C. 171; *Hornblower v. Boulton* (1799), 8 T. R. 95; 1 Abb. P. C. 98; *Boulton v. Bull* (1795), 2 H. Bl. 463; 1 Abb. P. C. 59; *R. v. Arkwright* (1785), 1 Web. 64; 1 Abb. P. C. 29; *Arkwright v. Nightingale* (1785), 1 Web. 60; 1 Abb. P. C. 24.

That the Description must be sufficient to enable persons skilled in the art to construct and use the invention from it alone, see *Downton v. Yaeger Milling Co.* (1879), 17 O. G. 906; 1 Fed. Rep. 199; 1 McCrary, 26; 5 Bann. & A. 112; *Keith v. Hobbs* (1878), 69 Mo. 84; *Jenkins v. Walker* (1872), 1 O. G. 359; 5 Fisher, 347; *Holmes*, 120;

Wood v. Underhill (1847), 5 How. 1; 2 Robb, 588; *Brooks v. Jenkins* (1843), 3 McLean, 250; 2 Robb, 118.

That persons "skilled in the art" are those of ordinary and fair information, not of special excellence, see *Ex parte Kerr* (1884), 28 O. G. 95; *Foxwell v. Bostock* (1864), 10 L. T. Rep. N. S. 144; *Househill Co. v. Neilson* (1842), 1 Web. 673; *Neilson v. Harford* (1841), 1 Web. 295; *Morgan v. Seaward* (1836), 1 Web. 170; 2 Abb. P. C. 262; *Sturtz v. De La Rue* (1828), 5 Russ. 322; 1 Web. 83; 1 Abb. P. C. 399; *Manton v. Manton* (1815), Dav. P. C. 333; 1 Abb. P. C. 189.

² That the inventor has a right to assume that those who read his Description have a knowledge of the art, see *Royer v. Coupe* (1886), 29 Fed. Rep. 358; 39 O. G. 239; *Tompkins v. Gage* (1865), 2 Fisher, 577; 5 Blatch. 268.

That though the Description is to be read by persons skilled in the art, yet only known equivalents are covered by it, see *Woodward v. Morrison* (1872), 2 O. G. 120; *Holmes*, 124; 5 Fisher, 357; *Heath v. Unwin*, (1855), 25 L. T. C. P. 19.

That if, on the assumption that certain matters are known to those skilled in the art, the specification is intelligible, it is sufficient, see *Hancock Inspirator Co. v. Lally* (1886), 27 Fed. Rep. 88; 35 O. G. 1001.

That the specification of a pioneer invention is addressed to persons skilled in the art as the art existed at the date of the invention, and it cannot be supplemented by a knowledge of subsequent events or of another's invention of the same thing, see *Voelker v. Gray* (1885), 30 O. G. 1091.

That if a Description is sufficient at

§ 489. The Description Sufficient if Sufficient when Construed with the other Parts of the Application.

The inventor also has a right to assume that those who seek for information in his patent will examine it in the manner usually employed in reference to other legal documents. Every instrument, whether it be a statute, a grant, or a contract, is construed as a whole, not by detached passages; and the imperfections and obscurities of one part are thus removed or interpreted by the others. The same method must be followed in reading the specification of a patent.¹ Lan-

the date of the patent subsequent discoveries cannot make it less so, see *Celluloid Mfg. Co. v. American Zylonite Co.* (1887), 40 O. G. 1453; 30 Fed. Rep. 437.

§ 489. ¹ In *Howes v. Nute* (1870), 4 Clifford, 173, Clifford, J.: (174) "Evidently the question as to the sufficiency of the Description and specification must be determined, like a question of construction, from what is written, aided by the drawings, and, if need be, by the Patent Office model. Particular passages in the Description must not be separated from what precedes or follows them in the same connection, but one part of the instrument must be compared with another, and the whole considered together, in order to determine whether it is incomplete and ambiguous, or sufficient to uphold the Claim of the patent." 4 Fisher, 263 (265).

In *Singer v. Walmsley* (1860), 1 Fisher, 558, Giles, J.: (582) "In examining the question the jury are to look at the drawings as well as the specifications, for they are a part of the description of the thing patented; also to the state of the art at the time of the invention, and the knowledge of previous improvements in sewing-machines which were then in general use. But if, from the specifications and drawings taken as a whole, any person skilled as aforesaid could construct and use the sewing machine or device therein described

without invention of his own, which would attain the result claimed for it in the said patent, then the said patent is good although there may be a mistake in describing the action of some part of the machinery, but which mistake could be easily discovered by the mechanic when he came to examine the same."

In *Whitney v. Emmett* (1831), Baldwin, 303, Baldwin, J.: (314) "In deciding on its sufficiency, the court inspect the whole description as one paper, which they assume to be true in fact, and if found to be in conformity with the requisitions of the law, so that it appears with reasonable certainty, either from the words used or by necessary implication, in what the invention or improvement consists, as claimed by the patentee, they will adjudge it sufficient. 1 Mason's Rep. 188, 189. A description, though in some respects obscure, imperfect, or not so intelligible as to fully answer all the objects of the law, is good if it enables the court to specify the improvement or invention patented, from the face of the patent and accompanying papers. It is enough if there is a substantial description of the thing patented, though defective in form or mode of explanation. In this respect the papers will be viewed in the same light as a declaration in a suit at law; the court, looking on them as a statement of the patentee's right and title, will overlook all defects in the mode of

guage is to be considered in connection with its context; one clause of description with others relating to the same subject; delineations of the parts of the invention with directions for its construction, or its use; the written Description with the drawings and the model; the entire specification and its adjuncts with the petition, oath, and other portions of the application; and if from them, all together, the necessary knowledge can be gained by those to whom the specification is addressed, the Description is sufficient.²

§ 490. The Description must be Correct: Correctness Defined.

Having regard to the persons to whom the specification is addressed, and the interpretation which it may receive from accompanying documents, the description of each one of its three subjects-matter must be correct, complete, and intelligible.¹ A description is correct when the idea expressed by

setting it out, if it contains a substantial averment of such matter as suffices in law to make out a cause of action. This is a question of law which the court decides; it is a question for the jury to decide, whether the statements are true in fact; the court does not look beyond the patent and the other papers, but the jury decide from the papers, the evidence of the witnesses, an inspection of the old and new machine and the model, to ascertain whether in point of fact the specification, as made out at the trial, is sufficient." 1 Robb, 567 (583).

That the Description is sufficient if from it, aided by the drawings, model, and other parts of the application; the invention can be fully ascertained, see *Judson v. Moore* (1860), 1 Fisher, 544; 1 Bond, 285; *Goodyear v. Railroad* (1853), 2 Wall. Jr. 356; 1 Fisher, 626; *Kneass v. Schuylkill Bank* (1820), 4 Wash. 9; 1 Robb, 303.

That the drawings may aid the Description, see *Banker v. Bostwick* (1880), 18 O. G. 61; 3 Fed. Rep. 517; 5 Bann. & A. 463; *Swift v. Whisen* (1867), 2 Bond, 115; 3 Fisher, 343; *Judson v. Moore* (1860), 1 Fisher, 544; 1 Bond,

285; *Foss v. Herbert* (1856), 2 Fisher, 31; 1 Bissell, 121; *Earle v. Sawyer* (1825), 4 Mason, 1; 1 Robb, 490; *Daw v. Eley* (1867), 13 L. T. Rep. N. S. 399; *Hastings v. Brown* (1853), 1 E. & B. 450; *Morgan v. Seaward* (1838), 1 Web. 170; 2 Abb. P. C. 262; *Bloxam v. Elsee* (1825), 1 C. & P. 558; 1 Abb. P. C. 373.

That an imperfect Description coupled with incomplete drawings does not disclose the invention, see *New Process Fermentation Co. v. Koch* (1884), 29 O. G. 535; 21 Fed. Rep. 580.

That a mistake in copying the specification in a re-issue which is corrected by the other parts of the description is of no consequence, see *Kendrick v. Emmons* (1875), 2 Bann. & A. 208; 9 O. G. 201.

That a caveat not recited in the specification belongs to the history of the invention, not to its description, see *Ex parte Chubb* (1872), 2 O. G. 519.

² See further as to the interpretation of the Description, etc., §§ 735-745 and notes, *post*.

§ 490. ¹ In *O'Reilly v. Morse* (1853), 15 How. 62, Taney, C. J. : (119) "Who-

the words of which it consists corresponds exactly with the real nature of the thing described. The law requires this correspondence between the actual invention, or the acts by which it is constructed or put into practical use, and the language in which these several matters are portrayed.² The

ever discovers that a certain useful result will be produced, in any art, machine, manufacture, or composition of matter, by the use of certain means, is entitled to a patent for it; provided he specifies the means he uses 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 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 upon mechanical principles. In either case he must describe the manner and process as above mentioned, and the end it accomplishes.

The present statute declares that the Description must be in terms that are "full, clear, concise, and exact." The act of 1836 prescribed that the language shall be "full, clear, and exact, without unnecessary prolixity." The act of 1793 simply required terms "full, clear, and exact." The qualities intended to be secured in the Description by these provisions were evidently the three mentioned in the text, viz.: correctness, completeness, and intelligibility.

That the Description must be correct, complete, and intelligible, see *Parks v. Booth* (1880), 102 U. S. 96; 17 O. G. 1089; *Schneider v. Thill* (1880), 5 Bann. & A. 565; *Judson v. Moore* (1860), 1 Fisher, 544; 1 Bond, 285; *Brooks v.*

Jenkins (1844), 3 McLean, 432; *Park v. Little* (1813), 3 Wash. 196; 1 Robb, 17.

² In *Lowell v. Lewis* (1817), 1 Mason, 182, Story, J.: (188) "A patent is grantable only for a new and useful invention; and, unless it be distinctly stated in what that invention specifically consists, it is impossible to say whether it ought to be patented or not; and it is equally difficult to know whether the public infringe upon or violate the exclusive right secured by the patent. 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. The language of the patent act itself is decisive on this point. . . . It is, however, sufficient if what is claimed as new appear with reasonable certainty on the face of the patent, either expressly or by necessary implication. But it ought to appear with reasonable certainty, for it is not to be left to minute inferences and conjectures from what was previously known or unknown; since the question is not, what was before known, but what the patentee claims *as new*; and he may, in fact, claim as new and patentable what has been long used by the public. Whether the invention itself be thus

difficulty of framing such a Description does not dispense with its production. As no inventive act is performed until the inventor so fully comprehends his own invention that he is able to communicate its essential characteristics to other men, so nothing can be said to be invented unless it can also be described.³ This rule is, however, satisfied when the Description corresponds substantially with the necessary attributes of the subject delineated. Absolute precision, even in essentials, is not possible, owing in part to the various senses in which the same words may be employed, and in part to the different impressions made by the same object upon different minds.⁴ Slight errors in essential points and grave mistakes on immaterial points are therefore overlooked unless they would mislead a cautious reader of the whole Description. Wrong names applied to subjects or their qualities; erroneous theories as to the causes which produce a given effect;

specifically described with reasonable certainty is a question of law upon the construction of the terms of the patent, of which the specification is a part." 1 Robb, 131 (136). See also *Tucker v. Tucker Mfg. Co.* (1876), 4 Clifford, 397; 10 O. G. 464; 2 Bann. & A. 401; *Langdon v. De Groot* (1822), 1 Paine, 203; 1 Robb, 433.

That failure to describe an essential element avoids the patent, see *Schneider v. Thill* (1880), 5 Bann. & A. 565; *Carr v. Rice* (1856), 1 Fisher, 198; *Liardet v. Johnson* (1778), 1 Web. 53; 1 Abb. P. C. 22.

³ That nothing can be patented unless it can be described, and that a patentee cannot have invented what he cannot describe, see *Smith v. Downing* (1850), 1 Fisher, 64.

⁴ In *Goodyear v. Railroad* (1853), 1 Fisher, 626, Grier, J.: (634) "On account of the great vagueness and indefiniteness of the language used in describing the various arts, machines, manufactures, and compositions of matter, it is almost impossible to describe the real nature of many discoveries or

processes in language free from ambiguity or misconstruction. Different persons, looking at it from different points of view, would describe it in different terms. In the present case, one would describe it as 'the art of curing India rubber;' another, '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.'" 2 Wall. Jr. 356 (363).

That the description of the subject-matter must vary in definiteness according to its nature, see *Mowry v. Whitney* (1872), 14 Wall. 620; 5 Fisher, 494; 1 O. G. 492.

That absolute precision is not required, see *Dorsey Harvester Rake Co. v. Marsh* (1873), 6 Fisher, 387.

That immaterial errors are not regarded, see *McKesson v. Carrick* (1881), 19 Blatch. 158; 21 O. G. 137; 9 Fed. Rep. 44.

unfounded statements in regard to the results which the invention will accomplish; defects which are apparent to those skilled in the art and which their ordinary mechanical information would enable them to remedy, — all these inaccuracies, and others of a similar character, are consistent with that substantial correctness in essentials without which a knowledge of the invention cannot be communicated to the public.⁵

§ 491. **The Description must be Complete: Completeness Defined.**

A description is complete when it embraces every essential part and attribute of the thing described. The Description in a specification is complete, within the meaning of the law, when by following it precisely as it reads, without addition or subtraction, a person skilled in the art could make and use the invention. But here, also, a perfect agreement between the language employed by the inventor and the facts and acts which it endeavors to express is not always attainable. Immaterial parts are often so connected with the material that the description of the latter inevitably draws after it the delineation of the former; and on the other hand, many material objects and operations are so familiar to the inventor

⁵ That the Description is sufficient, in spite of technical defects, if the invention clearly appears, see *Adams v. Joliet Mfg. Co.* (1877), 12 O. G. 93; 3 Bann. & A. 1.

That mistakes in naming the invention, or in assigning it to its proper class, as by calling it a product when it is a process, do not render the Description insufficient, see *Foye v. Nichols* (1882), 8 Sawyer, 201; 22 O. G. 2243; 13 Fed. Rep. 125; *Goodyear v. Railroad* (1853), 2 Wall. Jr. 356; 1 Fisher, 626; *Neilson v. Harford* (1841), 1 Web. 331; *Minter v. Mower* (1835), 1 Web. 138; 2 Abb. P. C. 178; *Derosne v. Fairie* (1835), 1 Web. 154; 2 Abb. P. C. 78.

That though the Description states that the invention will do some trifling thing which it will not do, it is still

sufficient, see *Blanchard Gun Stock Turning Factory v. Warner* (1848), 1 Blatch. 258.

That the omission to state that a certain function is the leading feature of the invention is not fatal, see *Burden v. Corning* (1864), 2 Fisher, 477.

That defects which those skilled in the art would remedy from their own knowledge are not fatal, see *Whitney v. Mowry* (1867), 3 Fisher, 157; 2 Bond, 45; *Swift v. Whisen* (1867), 3 Fisher, 343; 2 Bond, 115; *Singer v. Walmsley* (1860), 1 Fisher, 558.

That the Description is sufficient if it corresponds in principle, though not in form, with the actual invention, see *Weir v. North Chicago Rolling Mill Co.* (1883), 23 O. G. 191; 9 Bissell, 508; 14 Fed. Rep. 42.

and his readers that their specific description, or even an allusion to them, would be superfluous. The law recognizes these difficulties in the way of an absolutely complete Description, and overlooks the defects which they occasion. Though the Description is excessive it is still sufficient, unless the redundancy is fraudulent or renders the essential parts of the Description uncertain and obscure. Though it omits appliances, modifications, or processes which persons skilled in the art would know were necessary and would themselves supply; though it fails to describe implements and materials that are in common use, or methods of construction generally practised in the arts, — it may still be complete enough to put before the already trained and informed intelligence of the reader an accurate and entire picture of the invention, from which he can understand it, construct it, and use it as easily as if all these familiar acts and objects were particularly described.¹

§ 491. ¹ That the Description need not describe what is in common use, see *Thompson v. Gildersleeve* (1888), 43 O. G. 886; *Burrall v. Jewett* (1830), 2 Paige (N. Y.) 134; *Kneass v. Schuylkill Bank* (1820), 4 Wash. 9; 1 Robb, 303.

That modifications and appliances which would suggest themselves to ordinary mechanics need not be mentioned, see *Union Paper Bag Co. v. Nixon* (1873), 4 O. G. 31; 6 Fisher, 402; *Wayne v. Holmes* (1856), 2 Fisher, 20; 1 Bond, 27.

That if a process can be performed by those skilled in the art by following the directions given in the Description, using their own knowledge of the art, it is sufficient, see *Lawther v. Hamilton* (1888), 42 O. G. 487.

That well-known processes and devices need not be described, see *Mulford v. Pearce* (1875), 9 O. G. 204; 13 Blatch. 173.

That it is not necessary to describe all the uses of the invention, see *Pike v. Potter* (1859), 3 Fisher, 55.

That the Description need not men-

tion all that is necessary to secure the best effect if a good effect can be secured by what is described, see *Sewall v. Jones* (1875), 91 U. S. 171; 9 O. G. 47.

That unless a good effect can be obtained by using what is described, the patent is void, see *Sewall v. Jones* (1875), 91 U. S. 171; 9 O. G. 47.

That if persons skilled in the art can practise the invention from the description given the omission of minor details is not important, see *Burrall v. Jewett* (1830), 2 Paige (N. Y.), 134.

That the Description must show a new invention in fact, see *Head v. Stevens* (1838), 19 Wend. 411.

That the Description must be so complete that one skilled in the art can practise the invention from it alone, see *Webster Loom Co. v. Higgins* (1879), 16 O. G. 675; 15 Blatch. 446; 4 Bann. & A. 88.

That the Description need not mention all things that may be used if those which are named will answer the purpose, see *Bickford v. Skewes* (1841), 1 Web. 214; 2 Abb. P. C. 528.

§ 492. The Description must be Intelligible: Intelligibility Defined.

A description is intelligible when the language and the methods of statement which it employs convey to the mind of the reader the exact ideas embodied in the subject or the act described. A Description may be correct and complete and yet not be intelligible, either because of its undue brevity, or its excessive prolixity, or the strangeness of its words, or the confused arrangement of its sentences. Such a Description in a specification is not permissible.¹ It must not only be correct in what it states, and state completely the entire invention, but its phraseology and the collocation of its sentences must make these statements clear and plain to those skilled artisans to whom it is addressed.² The inventor may assume that they will understand the technical terms peculiar to their art, and that they will be able to follow such direc-

§ 492. ¹ That if the Description is unintelligible the patent is void, see *Sawyer v. Miller* (1882), 4 Woods, 472; 12 Fed. Rep. 725; *Hovey v. Stevens* (1846), 3 W. & M. 17; 2 Robb, 567; *Hovey v. Stevens* (1846), 1 W. & M. 290; 2 Robb, 479; *Kneass v. Schuylkill Bank* (1820), 4 Wash. 9; 1 Robb, 303; *Newberry v. James* (1817), 1 Carp. P. C. 368; 1 Abb. P. C. 282.

That vagueness of language in the Description does not defeat the patent, if the real invention can be known by it, see *Goodyear v. Railroad* (1853), 1 Fisher, 626; 2 Wall. Jr. 356.

² In *Lowell v. Lewis* (1817), 1 Mason, 182, Story, J. : (189) "A question nearly allied to the foregoing is whether (supposing the invention itself be truly and definitely described in the patent) the specification is in such full, clear, and exact terms, as not only to distinguish the same from all things before known, but '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.' This is another re-

quisite of the statute (§ 3), and it is founded upon the best reasons. The law confers an exclusive patent-right on the inventor of anything new and useful, as an encouragement and reward for his ingenuity, and for the expense and labor attending the invention. But this monopoly is granted for a limited term only, at the expiration of which the invention becomes the property of the public. Unless, therefore, such a specification was made as would at all events enable other persons of competent skill to construct similar machines, the advantage to the public which the act contemplates would be entirely lost, and its principal object would be defeated. It is not necessary, however, that the specification should contain an explanation, level with the capacities of every person (which would, perhaps, be impossible); but, in the language of the act, it should be expressed in such full, clear, and exact terms, that a person skilled in the art or science of which it is a branch would be enabled to construct the patented invention." 1 Robb, 131 (137).

tions as a master-workman would give to his subordinates;⁸ but he must, in any event, bring the terms of his Description down to the level of their understanding, and in it give to

⁸ In *Mowry v. Whitney* (1871), 14 Wall. 620, Strong, J.: (644) "And it is evident that the definiteness of a specification must vary with the nature of its subject. Addressed as it is to those skilled in the art, it may leave something to their skill in applying the invention, but it should not mislead them. The objection here is that in describing the degree of heat to be applied after the wheels have been deposited in the heated chamber the patentee states it to be such that the temperature of all parts of the wheels 'may be raised to the same point, say a little below that at which fusion commences,' and the defendant insists that this amounts to a direction to raise the heat to a degree that must destroy the chill of the tread, and thus render the casting valueless as a railroad car-wheel. But it is obvious that only vague and uncertain directions could have been given respecting the extent to which the heat is necessary to be raised. It must differ with the difference in the progress of cooling which has taken place before the wheels are removed from the moulds. The process requires this removal before they have become so much cooled as to produce such inherent strain on any part as to impair its ultimate strength. Precisely when such a strain begins cannot be known. Cooling commences the instant the casting is made, and with cooling commences contraction, and strain must soon follow. Plainly it is impossible to describe the point of time when the strain has proceeded so far as to impair the ultimate strength of any part of the wheel. That, in the nature of things, must be left to the judgment of the operator." 5 Fisher, 494 (503); 1 O. G. 492 (495).

In *Judson v. Moore* (1860), 1 Fisher,

544, Leavitt, J.: (548) "The statute must have a fair and reasonable construction; and if the jury believe, from the evidence before them, that this invention can be constructed by the exercise of skill and judgment on the part of a mechanic, they will come to the conclusion that these specifications are sufficient in the aspect of the case to which I now refer. It may be remarked that in carrying out any invention the exercise of some skill and judgment on the part of the mechanic called to construct it will always be required. Something must necessarily be left to him. If with the exercise, therefore, of ordinary intelligence and skill, the jury believe that the invention could be constructed from the information given by the patent, there would be no doubt that the specifications answered the requisites of the statute." 1 Bond, 285 (290).

That if the Description uses terms intelligible to persons skilled in the art it is sufficient, see *Loom Co. v. Higgins* (1881), 105 U. S. 580; 21 O. G. 2031; *Anilin v. Higgin* (1878), 15 Blatch. 290; 14 O. G. 414; 3 Bann. & A. 462; *Monce v. Adams* (1874), 12 Blatch. 1; 7 O. G. 177; 1 Bann. & A. 126; *Singer v. Walmsley* (1860), 1 Fisher, 558.

That a Description is to be read as if the invention were present and the reader skilled in the art, see *Loom Co. v. Higgins* (1881), 105 U. S. 580; 21 O. G. 2031.

That the Description, being addressed to persons skilled in the art, is to be modified as they would modify it, see *Klein v. Russell* (1873), 19 Wall. 433.

That the ability of the inventor or his attorney to understand the Description is no proof of its intelligibility, see *Ex parte Kerr* (1884), 28 O. G. 95.

them a practical, intelligible, and reliable guide to the character of his invention, and the best method of constructing it and employing it in the arts.

§ 493. **The Description : Ambiguity, when Fatal.**

When a Description fails in either of these requisites of correctness, completeness, and intelligibility, it is said to be ambiguous; and where this ambiguity exists to any considerable degree it is fatal to the patent.¹ The courts are properly inclined to protect the inventor in spite of any errors into which he may have fallen through his own unskilfulness in the use of language, or through a too great dependence on the supposed knowledge of others. Early decisions in this country, indeed, went so far as to declare his patent valid even where his Description was so imperfect as to be practically useless as a guide to the public, unless its imperfection was intentional and fraudulent;² and though this doctrine has

§ 493. ¹ That no ambiguous or equivocal Description can be permitted, see *Ex parte Gould* (1876), 10 O. G. 203.

That when the Description is ambiguous and calculated to mislead, the patent is void, see *Carlton v. Bokee* (1872), 17 Wall. 463; 2 O. G. 520; 6 Fisher, 40; *Walton v. Potter* (1841), 1 Web. 585; 1 Abb. P. C. 345; *Campion v. Benyon* (1821), 6 Moore, 71; 1 Abb. P. C. 345.

That the consequences of uncertainty in the Description must fall on the plaintiff, see *Poppenhusen v. Falke* (1861), 2 Fisher, 181; 4 Blatch. 493.

² In *Whitney v. Emmett* (1831), Baldwin, 303, Baldwin, J. : (321) "Here the patent contains no proviso declaring it void, if the specification is not in conformity with the law; this is provided for in the sixth section as a substitute for the proviso, and defines the causes for which a circuit court can adjudge a patent void, in a civil suit, for defects in the specification. These are concealment or addition, fully appearing to have been made for the pur-

pose of misleading the public, which is wilful fraud clearly proved; but the court cannot bring within this definition a patent with a specification defective on other grounds, still less act upon the English principle, that the specification is for the purpose of giving the public the benefit of the invention after the expiration of the patent, as that would be in contradiction to the act of Congress expressly assigning other reasons. Such has been the uniform construction of the law in the circuit courts, that a patent can be declared void for no other defect in the specification than fraudulent concealment or addition. 1 Peters C. C. Rep. 401; 1 Wash. 171; 3 Wash. 198; 1 Mason, 189, 190; 1 Gall. 434; 7 Wheat. 429, 430. No discretion is left to the circuit courts to annul a patent for any reason not contained in the acts of Congress; they have not left us free to infer motives, objects, and grounds of supposed policy for requiring specifications; the third section of the act of 1793 defines them without any declaration that the

been overruled by sounder judgments, indulgence is still shown to the mistakes of inventors so far as a due regard

patent shall be void if the specification is defective. English decisions, therefore, founded on the assumed reason for the grant of a patent, are not of authority here where the Constitution and laws give other reasons, and omit the one founded on the public benefit to result from the disclosure after the expiration of the privilege. You will therefore not make that a subject of deliberation, for it is not material whether the public can profit by the invention during or after the term of the patent. The true inquiry is whether, in the spirit of the law, the plaintiffs have made such a description of the thing patented as to distinguish it from all others before known, and to enable others skilled in the matter to make, compound, or use it, and to explain the principle and mode of application by which it can be so distinguished from other inventions. If from the patent, specification, drawings, model, and old machine, clear ideas are conveyed to men of mechanical skill in the subject-matter, by which they could make or direct the making of the machine by following the directions given, the specification is good within the act of Congress." 1 Robb, 567 (591).

In *Gray v. James* (1817), Peters, C. C. 394, Washington, J. : (401) "But if the jury should be of opinion that the specification is materially defective, the objection will not be sufficient to invalidate the plaintiff's patent, unless they should also be satisfied that the concealment of the circumstances not described was intended to deceive the public. What degree of evidence ought to be required to prove such fraudulent intention must rest with the jury to decide. Positive evidence can seldom be expected, nor is it necessary. The law, it is true, requires that such intention

should fully appear ; but still it may be presumed from circumstances entirely to the satisfaction of the jury, which would be sufficient to authorize them to find the fact. As if the parts concealed are so essential and so obviously necessary to be disclosed that no mechanic skilled in the art could reasonably be expected to understand the subject, so as from the description given to make the machine, it would be difficult to impute the omission of the patentee to a fair motive. But this presumption would seem to be much weakened in a case like the present, where so many practical mechanics have testified that they could not hesitate in supplying the omissions in this specification." 1 Robb, 120 (128).

In *Whittemore v. Cutter* (1813), 1 Gallison, 429, Story, J. : (435) "It is therefore argued that if the specification be materially defective, or obscurely or so loosely worded that a skilful workman in that particular art could not construct the machine, it is a good defence against the action, although no intentional deception has been practised. And this is beyond all question the doctrine of the common law ; and it is founded in good reason ; for the monopoly is granted upon the express condition that the party shall make a full and explicit disclosure, so as to enable the public, at the expiration of his patent, to make and use the invention or improvement in as ample and beneficial a manner as the patentee himself. If, therefore, it be so obscure, loose, and imperfect that this cannot be done, it is defrauding the public of all the consideration upon which the monopoly is granted. And the motive of the party, whether innocent or otherwise, becomes immaterial, because the public mischief remains the same. It is said that the

to the rights of the public will permit.³ However vague may be the representation of his invention given by the Description, if from it, taken in connection with its accompanying drawings and model, a person skilled in the art to which it belongs can by the exercise of his mechanical powers and information alone construct and use the invention, the ambiguity is not fatal.⁴ But if experiment or inventive skill on

law is the same in the United States, notwithstanding the wording of the sixth section, for there is a great distinction between a concealment of material parts, and a defective and ambiguous description of all the parts; and that in the latter case, although there may be no intentional concealment, yet the patent may be avoided for uncertainty as to the subject-matter of it. There is considerable force in the distinction at first view; and yet, upon more close examination, it will be difficult to support it. What is a defective description but a concealment of some parts necessary to be known in order to present a complete view of the mechanism? In the present case the material defects were stated, among other things, to consist in a want of a specific description of the dimensions of the component parts, and of the shapes and position of the various knobs. Were these a concealment of material parts, or a defective and ambiguous disclosure of them? Could the Legislature have intended to pronounce that the concealment of a material spring should not, unless made with design to deceive the public, avoid the patent, and yet that an obscure description of the same spring should at all events avoid it? It would be somewhat hazardous to attempt to sustain such a proposition. It was probably with a view to guard the public against the injury arising from defective specifications that the statute requires the letters-patent to be examined by the attorney general, and certified to be in conformity to the law, before the great

seal is affixed to them. In point of practice, this must unavoidably be a very insufficient security, and the policy of the provision that has changed the common law may be very doubtful. This, however, is a consideration proper before another tribunal. We must administer the law as we find it. And, without going more at large into this point, we think that the manifest intention of the Legislature was, not to allow any defect or concealment in a specification to avoid the patent, unless it arose from an intention to deceive the public. There is no ground, therefore, on which we can support this objection." 1 Robb, 28 (34).

In *Park v. Little* (1813), 3 Wash. 196, Washington, J. : (198) "It is true that the thing for which the patent is granted should be truly and fully described in the specification; but if this is done, so as clearly to distinguish it from all other things before known, and so as to enable any person skilled in the art of which it is a branch, or with which it is most nearly connected, to make and use the same, it is sufficient, — the matters not disclosed must appear to have been concealed for the purpose of deceiving the public, to invalidate the patent." 1 Robb, 17 (19).

³ That ambiguity in the Description is fatal irrespective of the intent of the inventor, see *Blake v. Stafford* (1868), 3 Fisher, 294; 6 Blatch. 195; also §§ 969, 970, 972, 1035, 1037 and notes, *post*.

⁴ In *Ames v. Howard* (1833), 1 Sumner, 482, Story, J. : (485) "The

the part of the constructor or the user is necessary to render the invention available in practice, the Description is fatally ambiguous, and the patent granted on the specification which contains it is invalid.⁵

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 subtile objections of a purely technical character. Now let us see what is the invention, as claimed by the plaintiff in the specification in this case. I agree that if he has left it wholly ambiguous and uncertain, so loosely defined, and so inaccurately expressed that the court cannot, upon a fair interpretation of the words and without resorting to mere vague conjecture of intention, gather what it 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 the plaintiff is entitled to the benefit of it, however imperfectly and inartificially he may have expressed himself. And for this purpose we are not to single out particular phrases standing alone, but to

take the whole in connection." 1 Robb, 689 (392).

That ambiguity is not fatal unless the Description is rendered unintelligible, see *Swift v. Whisen* (1867), 2 Bond, 115; 3 Fisher, 343; *Judson v. Moore* (1860), 1 Fisher, 544; 1 Bond, 285.

That ambiguity may be removed by the oath or other parts of the application, see *Pettibone v. Derringer* (1818), 4 Wash. 215; 1 Robb, 152.

That if the Description has no apparent meaning when construed by the court, the patent is void, see *Emerson v. Hogg* (1845), 2 Blatch. 1.

That any ambiguity, which is sufficient to perplex persons skilled in the art, is fatal, see *Page v. Ferry* (1857), 1 Fisher, 298.

See also §§ 969, 970, 1034, 1035 and notes, *post*.

⁵ That the Description must so disclose the invention that no further exercise of inventive skill is necessary in order to practise it, see *Neilson v. Harford* (1841), 1 Web. 331; *Morgan v. Seaward* (1836), 1 Web. 170; 2 Abb. P. C. 262; *R. v. Arkwright* (1785), 1 Web. 64; 1 Abb. P. C. 29.

That no further experiment must be needed to practise the invention, see *Lockwood v. Faber* (1886), 27 Fed. Rep. 63; *Simpson v. Holliday* (1865), 12 L. T. Rep. n. s. 99; *Muntz v. Foster* (1844), 2 Web. 96; *McNamara v. Hulse* (1842), 2 Web. 128; 1 Coll. 477; *Neilson v. Harford* (1841), 1 Web. 331; *R. v. Wheeler* (1819), 2 B. & Ald. 345; 1 Abb. P. C. 317; *R. v. Arkwright* (1785), 1 Web. 64; 1 Abb. P. C. 29.

§ 494. **The Description: False Suggestion Fatal.**

A wilful false suggestion or concealment, in any point material to the invention or to the mode of making or using it, is also fatal to the interests of the inventor. He is obliged to keep faith with the public; and as he seeks to obtain the widest protection which it is in their power to bestow, he is, in his turn, bound to confer on them his entire secret in its most available and beneficial form. If for the purpose of misleading them and securing some advantage to himself, he states in his Description less than the whole truth, or asserts that things are necessary to produce the desired effect when he knows that they are not so, the fact that some degree of benefit may be derived from what he has described will not prevent the forfeiture of all right to any patent for the invention.¹ Such wilful fraud is never presumed from any defect in the Description which can be otherwise accounted for, but is to be established by direct or circumstantial evidence.²

§ 495. **The Description: its Form.**

Subject to the foregoing rules, the Description is left to the judgment and choice of the inventor. No particular form of words is prescribed to him, though where two or more phrases

§ 494. ¹ That a false suggestion in a material part of the specification avoids the patent, see *Delano v. Scott* (1834), *Gilpin*, 439; 1 *Robb*, 700; *Simpson v. Holliday* (1864), 20 *Newt. L. J. N. S.* 108; *Galloway v. Bleaden* (1839), 1 *Web.* 521; *Bloxam v. Elsee* (1825), 1 *C. & P.* 558; 1 *Abb. P. C.* 373.

That if the patent describes a false principle while the true one is disclosed to licensees, the patent is fraudulent and void, see *Dyson v. Danforth* (1865), 4 *Fisher*, 133.

That a concealment by which the patentee obtains an advantage over the public, if wilful, avoids the patent, see *Heath v. Unwin* (1852), 2 *Web.* 236; *Tetley v. Easton* (1852), *Macrory, P. C.* 48; *Walton v. Bateman* (1842), 1 *Web.* 613; *Neilson v. Harford* (1841), 1 *Web.* 295; *Morgan v. Seaward* (1836), 1

Web. 170; 2 *Abb. P. C.* 262; *Lewis v. Marling* (1829), 1 *Web.* 493; 1 *Abb. P. C.* 421; *Crompton v. Ibbotson* (1828), 1 *Web.* 83; 1 *Abb.* 394; *Bovill v. Moore* (1816), *Dav. P. C.* 361; 1 *Abb. P. C.* 231; *Wood v. Zimmer* (1815), 1 *Web.* 82; 1 *Abb. P. C.* 202; *Turner v. Winter* (1787), 1 *Web.* 77; 1 *Abb. P. C.* 43; *R. v. Arkwright* (1785), 1 *Web.* 64; 1 *Abb. P. C.* 29.

That if the Description asserts that things are necessary when they are known to the patentee to be useless, the patent is void, see *Lewis v. Marling* (1829), 1 *Web.* 493; 1 *Abb. P. C.* 421; *Huddart v. Grimshaw* (1803), 1 *Web.* 85; 1 *Abb. P. C.* 128; *R. v. Arkwright* (1785), 1 *Web.* 64; 1 *Abb. P. C.* 29.

See also § 969 and notes, *post.*

² See § 1034 and notes, *post.*

are open to his use the clearest and most easily understood is to be selected.¹ His modes of definition may vary according to the nature of the subject to which they relate, stating the characteristics and qualities of his invention in express language, or causing them to appear by necessary implication.² At the outset he should specify the particular art to which the invention appertains, and may then describe it either by concrete illustrations or the enumeration of its peculiar properties.³ The old and the new may be distinguished from each other by separate delineations, or both may be embraced in one general Description and the line be subsequently drawn between them by the Claim; and in describing the old, if patented, the prior patent may be referred to and be incorporated by such reference into the new specification.⁴ Words of recommendation may be used instead of words of direction, and will be regarded as essential parts of

§ 495. ¹ In *Wyeth v. Stone* (1840), 1 Story, 273, Story, J.: (286) "I agree that the patentee is bound to describe, with reasonable certainty, in what his invention consists, and what his particular claim is. But it does not seem to me that he is to be bound down to any precise form of words; and that it is sufficient, if the court can clearly ascertain, by fair interpretation, what he intends to claim, and what his language truly imports, even though the expressions are inaccurately or imperfectly drawn." 2 Robb, 23 (36).

That where there is a choice of expressions the inventor must select the clearest, see *Ex parte Gould* (1876), 10 O. G. 203.

² That the language and definitions of a Description vary with the subject-matter, see *Mowry v. Whitney* (1872), 14 Wall. 620; 5 Fisher, 494; 1 O. G. 492.

That the ordinary meaning of words, such as "tempering," is governed by the general language of the specification, see *Cary v. Lowell Mfg. Co.* (1887), 40 O. G. 1239; 31 Fed. Rep. 344.

³ That the Description ought to point out, at the beginning, the particular art.

machine, article, or composition to which the invention relates, in order that the whole specification may be read as applicable thereto, see *Ex parte Thompson* (1879), 16 O. G. 588.

That concrete and illustrative descriptions are as proper as abstract ones, see *Goodyear v. Railroad* (1853), 2 Wall. Jr. 356; 1 Fisher, 626.

⁴ That old parts may be distinguished from new by describing all and claiming the whole when so constructed as to produce the given effect, see *Gottfried v. Phillip Best Brewing Co.* (1879), 17 O. G. 675; 5 Bann. & A. 4.

That it is proper to describe the whole invention and point out what is new and what old, see *Wintermute v. Redington* (1856), 1 Fisher, 239.

That in distinguishing the new from the old the patentee is bound by the description as he gives it, see *Goodyear v. Railroad* (1853), 1 Fisher, 626; 2 Wall. Jr. 356.

That a prior patent may be referred to in the Description to show differences between it and the present invention, see *Ex parte Chubb* (1872), 2 O. G. 519.

the Description or not, as the actual nature of the invention may require.⁵ The application of a new natural force may be described either by describing the result with the mode of obtaining it, or by describing the means employed to produce it.⁶ But indirect methods of description should not be re-

⁵ In *Sewall v. Jones* (1875), 91 U. S. 171, Hunt, J. : (185) "Farther on, the patentee, Winslow, says, 'I recommend the following method.' This is not of the substance of the patent. A recommendation is quite different from a requirement. The latter is a demand, an essential, a necessity. The former is a choice or preference between different modes or subjects, and is left to the pleasure or the judgment of the operator. He may adopt it. He will do well if he does. But he may reject it, and still accomplish his object by means of the patent. The principle is this : The omission to mention in the specification something which contributes only to the degree of benefit, providing the apparatus would work beneficially and be worth adopting without it, is not fatal, while the omission of what is known to be necessary to the enjoyment of the invention is fatal. Curtis, sect. 248. An excess of description does not injure the patent, unless the addition be fraudulent. Id. sect. 250. Accordingly, when the inventor says, 'I recommend the following method,' he does not thereby constitute such method a portion of his patent. His patent may be infringed although the party does not follow his recommendation, but accomplishes the same end by another method." 9 O. G. 47 (49).

That the phrase "it is desirable, etc.," may make the thing referred to a part of the invention, see *Klein v. Russell* (1873), 19 Wall. 433.

⁶ In *Andrews v. Hovey* (1883), 5 McCrary, 181, Shiras, J. : (193) "It is not necessary to extend these quotations to show that the principle which

it is claimed constitutes the discovery or invention of Colonel Green, as described in the re-issued patent, is that the production of a vacuum in the earth by means of an air-tight tube driven into the earth, to which is attached a suction pump, will greatly increase the supply of water. To produce this vacuum it is necessary that the tube forming the lining of the well should be in such close contact with the surrounding earth as to be air-tight ; and it is claimed that driving the tube into the ground, whether with or without originally perforating the earth with a rod, constitutes a mode of constructing a well which practically results in producing a well whose lining, — to wit, the tube — is in air-tight connection with the earth. In other words, in order to successfully apply the principle, it is absolutely essential that the tube forming the lining of the well should be in such close contact with the earth that the air cannot pass down around the outside of the tube, and the pump used in drawing up the water must also be attached to the end of the tube by an air-tight connection. Unless both of these conditions are fulfilled it is impossible to create a vacuum in the tube, and about the portion of it inserted in the water-bearing stratum ; and as the creation of this vacuum is the essential and only means of applying the principle which it is claimed constitutes the chief merit of Colonel Green's invention or discovery, it follows that in order to protect such a discovery by a patent it must be included within the specifications. This may be done by either a proper description of the result to be obtained, with the mode

sorted to where the same degree of correctness and completeness is not attainable by them as might be reached by the direct.⁷ General words describing an effect do not describe the cause, unless the cause and the effect are indissolubly connected and are commensurate with each other.⁸ The description of a class of substances as an element in the invention is not correct except when each substance in the class will serve the purpose.⁹ A device is not portrayed by the delineation of its mode of use, nor is the use itself described unless a practical rule is given by following which the desired result can be obtained.¹⁰ In describing a generic

or means to be employed in producing the same, or by simply describing the means employed to accomplish the result; that is to say, it would be sufficient if it was stated that, by the use of certain prescribed means, a vacuum in and about the tube would be created, and thereby the supply of water would be increased, or if it was stated that the tubing of the well was so driven as to be made air-tight by contact with the surrounding earth, and the pump to be used was affixed to the tube by an air-tight connection. In the latter case the result reached or the principle put into operation would not be described; but as the means described must necessarily produce the result, or apply the principle, it is held sufficient to describe the means employed, without specifying the principle which is thereby brought into play. Indeed, it is not necessary that the inventor, to be entitled to a patent, should himself understand the abstract principle which his invention brings into use. It is sufficient if he is the inventor of a means whereby a new and useful application of the abstract principle is brought about. Still, as already remarked, it is necessary that in the patent and specifications the new and useful application of the principle must be described, either by setting forth the result obtained, with the means of its accomplishment, or else by

such a description of the means employed as will, if followed, necessarily produce a result which embodies the practical application of the principle involved." 16 Fed. Rep. 387 (395); 28 O. G. 1011 (1014).

That it is not enough to describe a result, — its mode of attainment must be shown, — see *Burrall v. Rumsey* (1877), 13 O. G. 123.

That a product may be described by describing its mode of production if no clearer way exists, see *Anilin v. Higgin* (1878), 15 Blatch. 290; 14 O. G. 414; 3 Bann. & A. 462.

⁷ That a Description is sufficient if it contains a proper designation of the invention, a clear statement of its parts, its operation, and its relation to surrounding matters, a distinct separation of the new from the old, and is followed by well-defined Claims, see *Ex parte Thompson* (1879), 16 O. G. 588.

⁸ That general words indicating an effect become descriptive of the cause only when the cause invariably produces the effect, see *Ex parte Carlock* (1875), 8 O. G. 191.

⁹ That if a class of substances be described as forming an element in the invention, the patent is void if any substance of the class will not answer the purpose, see *Schneider v. Thill* (1880), 5 Bann. & A. 565.

¹⁰ That to describe a mode of use is

invention, one species of the genus must be also described, and more may be, though but one species can be claimed and covered by the patent.¹¹

§ 496. **The Description when the Invention is a Combination.**

The general rules already stated are appropriate to the Description of all classes of inventions. Their application to particular classes has resulted in the establishment of subordinate rules in reference to each class, with the view of securing in its Description the necessary correctness, completeness, and intelligibility. These we shall now consider, commencing with those which relate to combinations. The essential features of a combination are its several elements and their co-operative law. Each of these must, therefore, be specifically described, and the drawings as well as the written matter must represent the elements in combination. This is no less imperative where the elements which enter into the combination are old and well known than where they are original with the inventor of the combination and have never been communicated to the public.¹ But beyond these essential features the Description need not go. The mechanism by which the elements of the combination are connected

not a description of the thing used, see *Ex parte Doten* (1877), 12 O. G. 841.

That the Description must give a fixed rule which can be successfully followed, though variations from it may be possible in practice, see *Tilghman v. Werk* (1862), 1 Bond, 511; 2 Fisher, 229.

¹¹ That a specification for a generic invention need describe but one species, though it may describe more, see *Ex parte Ewart* (1880), 17 O. G. 448.

That constructions illustrating generic Claims, but not themselves the basis of any Claim, may be described, see *Ex parte Howe* (1883), 25 O. G. 1189.

§ 496. ¹ That the specification of a combination of old elements must describe the old elements and the mode of combining them, see *Merrill v. Yeo-*

mans (1877), 94 U. S. 568; 11 O. G. 970.

That a vague description of a combination element or its total omission are vital defects of form, see *Ex parte Mill* (1887), 40 O. G. 918.

That a class of objects cannot be described as an element unless every object of that class will answer the purpose, see *Schneider v. Thill* (1880), 5 Bann. & A. 565; *Turner v. Winter* (1787), 1 Web. 77; 1 Abb. P. C. 43.

That where a specification confines the invention to one article as an element in a combination and says or implies that no other article will answer, no other article can be its equivalent, see *Schillinger v. Cranford* (1885), 4 Mackay, 450; 37 O. G. 1349.

with each other, those parts of the entire device which are either useless or serve incidental purposes not within the scope of the co-operative law, and the general invention of which the present combination might be a subordinate factor, may be omitted, except when its description is required in order to render that of the new invention sufficiently intelligible.²

§ 497. **The Description when the Invention is an Art.**

The essential characteristics of an art reside in the acts of which it is composed. These acts must, therefore, be correctly, completely, and intelligibly described. Physical means of some kind being required for the performance of these acts, such means and the mode of using them must also be particularly delineated, unless from the nature of the acts described they are sufficiently obvious to those to whom the specification is addressed.¹ But the Description need not include all the different physical means by which the art may be exercised, nor declare all the modes in which such means may be employed, provided the art can be successfully practised by using the apparatus actually described according to the rule laid down by the inventor.²

² That useless parts of a combination are not elements, see *Ex parte West* (1872), 2 O. G. 30. See also § 278 and notes, *ante*.

That a Description is good though it includes useless parts, if it does not state that they are essential, see *Lewis v. Marling* (1829), 1 Web. 493; 4 C. & P. 56; 1 Abb. P. C. 421.

That where the elements of a combination are clearly pointed out, other particulars of construction do not belong in it as an invention, see *Temple Pump Co. v. Goss Pump & Rubber Bucket Mfg. Co.* (1887), 39 O. G. 467; 30 Fed. Rep. 440; 31 Fed. Rep. 292.

§ 497. ¹ That the Description of an art must disclose the means, by which it can be successfully practised, with sufficient clearness to enable those skilled in the art to carry it into effect, unless

such means are obvious, see *The Telephone Cases* (1888), 126 U. S. 1; 43 O. G. 377; *Tilghman v. Proctor* (1881), 102 U. S. 707; 19 O. G. 859; *Downton v. Yaeger Milling Co.* (1880), 5 Bann. & A. 112; 1 McCrary, 26; 1 Fed. Rep. 199; 17 O. G. 906; *Ex parte Elbers* (1877), 12 O. G. 2; *Booth v. Kennard* (1837), 2 H. & N. 84; *Rex v. Wheeler* (1819), 2 B. & Ald. 345; 1 Abb. P. C. 317; *Boulton v. Bull* (1795), 2 H. Bl. 463; 1 Abb. P. C. 59.

That the Description of a chemical process is not addressed to persons ignorant of chemistry, see *Allen v. Hunter* (1855), 6 McLean, 303; *Heath v. Unwin* (1852), 2 Web. 236.

² That where the Description of a process gives a fixed rule which can be successfully followed it is sufficient, though variations from it are possible,

§ 498. The Description when the Invention is a Machine.

A machine is a mode of operation embodied in tangible materials. Its essence or principle is its structural law, and this must, therefore, be correctly and intelligibly explained. As this principle can be made available for use only by its expression in some actual mechanism, the best mode of constructing and employing such a mechanism must also be described. Every integral part of the machine, with its position and relation to the other parts, and with all those details of shape, proportion, and materials which are essential to the operation of the mechanism as a whole, should be delineated in such a manner as to distinguish the principle of this machine from those which underlie and govern all previous machines.¹ Other matters serve only the purposes of illustration, and may be omitted if the machine and its principle can be fully understood without them.²

see *Tilghman v. Werk* (1862), 1 Bond, 511 ; 2 Fisher, 229.

That a rule requiring heat "not less than 310°" does not limit the invention to that degree if the process is the same, see *Buchanan v. Howland* (1863), 2 Fisher, 341.

That where the Description of a chemical process uses terms applicable to several substances only one of which will answer, it is insufficient, see *Anilin v. Levinstein* (1884), L. R. 29 Ch. 366.

That where some heat is needed and no exact degree can be given because dependent on the condition of the substance treated, if a *maximum* and *minimum* are stated, the rest may be left to the judgment of the operator, see *Mowry v. Whitney* (1871), 14 Wall. 620 ; 5 Fisher, 494 ; 1 O. G. 492.

That a process may be described by describing either the result with the mode of obtaining it, or the means employed to produce it, see *Andrews v. Hovey* (1883), 16 Fed. Rep. 387 ; 5 McCrary, 181 ; 26 O. G. 1011.

That a process cannot be inferred by the court or the public from a descrip-

tion of its product, see *Western Electric Co. v. Ansonia Co.* (1885), 114 U. S. 447 ; 31 O. G. 1305.

§ 498. ¹ That the Description of a machine is sufficient when it contains a proper designation of the invention, a clear description of its parts, its operation, and its relation to surrounding matters, a distinct separation of the new and old, and is followed by well-defined Claims, see *Ex parte Thompson* (1879), 16 O. G. 588.

That a Description of the mode of using a machine is not a Description of the machine itself, see *Ex parte Doten* (1877), 12 O. G. 841.

That the failure to describe an essential element renders the whole Description defective, see *Carr v. Rice* (1856), 1 Fisher, 198 ; *Felton v. Greaves* (1829), 3 C. & P. 611 ; 1 Abb. P. C. 416.

That a failure to describe an element embraced in the idea of the inventor, but without which the new machine will work, is not a fatal defect, see *Carr v. Rice* (1856), 1 Fisher, 198.

² In *Page v. Ferry* (1857), 1 Fisher, 298, Wilkins, J. : (307) "Where the

§ 499. *The Description when the Invention is a Manufacture.*

A manufacture is the most indefinite of all the different classes of inventions. Its essential qualities are, of course, those without which it would cease to be the particular invention that it now is; but what these qualities are it is often difficult to ascertain and to declare. Various methods of describing manufactures have therefore been adopted, to suit the varying character of these inventions. Where its essential qualities are discernible these may be enumerated, and if this can be so clearly and precisely done as not only to give a complete knowledge of the new manufacture, but also to distinguish it from all others, it is the best mode of describing it. Where this is impossible, the process by which the manufacture is produced may be particularly delineated and the manufacture described as the result of that peculiar process. If the manufacture is obtained by using chemicals, the substances employed and their mode of use may be stated and the nature of their product thus defined.¹ But in all cases

object of the patent may be obtained by a competent mechanic of ordinary skill, one acquainted with the structure of similar machines, or structures involving the same principle, by fairly following out the specifications and drawings, without other inventions or additions or experiment, the patent is valid and unimpeached, and the rule of law is sufficiently met."

In *Brooks v. Jenkins* (1844), 3 McLean, 432, the court say: (447) "The utmost precision in the Description of the machine is not to be expected, nor is it essential. Parts of machinery and processes generally known need not be described. A wedge, pulleys, rollers, rack and pinion, and other things, known to all mechanics, will be supplied by the mechanist without stating their size or structure. Nor is it essential to state the proportionate parts of a machine, nor the velocity of its operations. These are matters of adjustment for the eye and judgment of the constructor. Whether a machine be large in its parts

or small, its motion slow or quick, makes no difference in the principle of it." See also *Temple Pump Co. v. Goss Pump & Rubber Bucket Mfg. Co.* (1887), 39 O. G. 467; 30 Fed. Rep. 440; *Singer v. Walmsley* (1860), 1 Fisher, 558; *Crossley v. Beverly* (1827), 1 Web. 106; 1 Abb. P. C. 409.

That the Description of a machine need not include modifications and appliances which practical use or their general knowledge would suggest to mechanics, see *Union Paper Bag Co. v. Nixon* (1873), 4 O. G. 31; 6 Fisher, 402.

That the phrase "vertical or nearly so" is certain enough for skilled mechanics, see *Swift v. Whisen* (1867), 2 Bond, 115; 3 Fisher, 343.

§ 499. ¹ That a manufacture may be described by describing its mode of production, if no better way exists, see *Anilin v. Higgin* (1878), 15 Blatch. 290; 14 O. G. 414; 3 Bann. & A. 462.

That a product may be described and claimed as the result of a described pro-

the manufacture must, in some way, be fully explained and be distinguished from all other inventions, and this being done, other assertions regarding it are immaterial. Thus when the manufacture can be understood without it, the process or machine by which it is produced need not be mentioned;² and if their description is attempted, a defect therein will not impair the validity of that by which the manufacture is explained.³

§ 500. **The Description when the Invention is a Composition of Matter.**

A composition of matter is a group of ingredients intermingled in a specific manner and producing a specific result which has new properties of its own. Thus it presents three essential subjects for description: the ingredients, their mode of intermixture, and the resulting composition. Each of the ingredients must be completely and exactly described, either by the name given to it in the arts or by an enumeration of its qualities, or in some other way intelligible to those who are to use it. Nothing must be left to experiment either as to their nature or their number, and no substance should be specified as an ingredient unless it is essential to the composition, since the inventor will be so far concluded by it that he cannot claim that any composition is identical with his un-

cess or "any process which will produce a like result," see *Pickhardt v. Packard* (1884), 23 Blatch. 23; 30 O. G. 179; *Anilin v. Higgin* (1878), 15 Blatch. 290; 14 O. G. 414; 3 Bann. & A. 462.

That unless a product is so described that it can be recognized apart from the description of the process of making it the patent will cover it only when made by that process, see *Cochrane v. Anilin* (1884), 111 U. S. 293; 27 O. G. 813.

That if the manufacture as disclosed by the Description is useful it is sufficient, though if better described it could be made to be more useful, see *McNamara v. Hulse* (1842), Car. & M. 471; 2 Web. 129.

² That a Description of a manufacture

need not describe the mode of producing it, see *McCloskey's Application* (1879), 3 MacArthur, 14; *Cohn v. United States Corset Co.* (1876), 93 U. S. 366; 11 O. G. 457; *Cohn v. United States Corset Co.* (1874), 12 Blatch. 225; 1 Bann. & A. 340; 6 O. G. 259.

³ That a specification may be sufficient for a product when it would not suffice if the invention were a machine, see *Brass Co. v. Miller* (1871), 5 Fisher, 48; 9 Blatch. 77.

That if the product be fully described and also the machine for making it, the description of the product will be sufficient though the machine prove useless, see *Magic Ruffle Co. v. Douglass* (1863), 2 Fisher, 330.

less it employs such substance or its equivalent.¹ In describing the mode of intermixture, the quantity and proportions of the several ingredients, and the process of compounding them, must be correctly and precisely stated. Here, also, nothing must be left open to be determined by experiment.² Where quantities and proportions must be exact in order to produce the composition, the Description must furnish this exact rule.³ Where variations in proportions or quantity are

§ 500. ¹ That ingredients must be so described that no further experiment to discover them will be needed, see *Tyler v. Boston* (1868), 7 Wall. 327; *Wood v. Underhill* (1847), 5 How. 1; 2 Robb, 588.

That the general description of a class of objects as ingredients is insufficient if one member of the class will not answer, see *Bickford v. Skewes* (1839), 1 Web. 214; *Turner v. Winter* (1787), 1 Web. 77; 1 Abb. P. C. 43.

That where "water" is mentioned as an ingredient any water must answer the purpose, see *Keith v. Hobbs* (1878), 69 Mo. 84.

That ingredients must be called by their usual names so as not to mislead, see *Strutz v. De La Rue* (1828), 1 Web. 83; 5 Russ. 323; 1 Abb. P. C. 399; *Savory v. Price* (1823), 1 Ry. & Mo. 1; 1 Web. 83; 1 Abb. P. C. 366.

² In *Jenkins v. Walker* (1872), Holmes, 120, Shepley, J.: (123) "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 when it was apparent that the proportions were stated ambiguously or 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 proportions of the different ingredients required to produce

the result intended to be obtained. 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 the invention; that is to say, to compound and use it without making any experiments of his own." 1 O. G. 359 (361); 5 Fisher, 347 (351).

In *Tyler v. Boston* (1868), 7 Wall. 327, Grier, J.: (330) "Now a machine which consists of a combination of devices is the subject of invention, and its effects may be calculated *a priori*, while a discovery of a new substance by means of chemical combinations of known materials is empirical and discovered by experiment. Where a patent is claimed for such a discovery, it should state the component parts of the new manufacture claimed with clearness and precision, and not leave the person attempting to use the discovery to find it out 'by experiment.' The law requires the applicant for a patent right to deliver a written Description of the manner and process of making and compounding his new-discovered compound. The art is new; and therefore persons cannot be presumed to be skilled in it, or to anticipate the result of chemical combinations of elements not in daily use."

That the proportions of ingredients must be so described that no further experiment will be needed to discover them, see *Wood v. Underhill* (1847), 5 How. 1; 2 Robb, 588.

³ That the phrase "about" in a

consistent with the attainment of the desired result, the limits of such variations must be definitely given.⁴ If differences in the quality or strength of the ingredients as commonly found existing in the arts require differences of proportion, this must be disclosed and a rule given which can be practically followed. The intermixture of ingredients is an art or process, and must be described in the same manner as any other art, each act with the physical means for performing it being specified unless already obvious to those skilled in the art.⁵ The composition itself may be described in the same method as a manufacture, either by enumerating its essential qualities, or where it is inseparably connected with the mode of production, by stating it as the result of the particular intermingling of the ingredients before described.⁶ In these descriptions

Description is uncertain, and the quantity or degree named will be taken as exact, the word "about" being disregarded, see *Davis v. Palmer* (1827), 2 Brock. 298 ; 1 Robb, 518.

⁴ That it is sufficient to describe the proportions of ingredients as lying within certain limits (e. g., "from $\frac{1}{4}$ lb. to 1 lb.") if any quantity within these limits will answer, see *Goodyear v. Wait* (1867), 5 Blatch. 468 ; 3 Fisher, 242.

That where the Description says that the proportions of ingredients may be varied, it does not cover all proportions, but only those within proximate limits, see *Francis v. Mellor* (1871), 5 Fisher, 153 ; 1 O. G. 48.

That the Description need not prescribe exact and unvarying proportions of ingredients, nor state that all the substances employed for collateral purposes (as coloring matter, etc.), if not true ingredients, must invariably be used, see *Klein v. Russell* (1873), 19 Wall. 433.

That if the Description states what the inventor considers the best proportions it is sufficient though others will answer, see *Patent Type Founding Co. v. Richard* (1859), 6 Jur. N. S. 39.

⁵ That the Description must enable

one skilled in the art to mix the ingredients, and produce the composition, without further experiment, see *Jenkins v. Walker* (1872), 5 Fisher, 347 ; 1 O. G. 359 ; Holmes, 120.

⁶ In *Goodyear v. Railroad* (1853), 1 Fisher, 626, Grier, J. : (635) "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." 2 Wall. Jr. 356 (364).

That a composition may be described by enumerating its qualities, see *Ex parte Tweddle* (1876), 10 O. G. 747.

That a composition may be described as the result of a described process when there is no clearer way of delineating it, see *Anilin v. Higgin* (1878), 15 Blatch. 290 ; 14 O. G. 414 ; 3 Baum. & A. 462 ; *Ex parte Tweddle* (1876), 10 O. G. 747 ; *Goodyear v. Railroad* (1853) 1 Fisher, 626 ; 2 Wall. Jr. 356.

That the patentee is not bound by

and directions the inventor may employ such technical terms as are customary in the art to which the composition belongs, however narrow may be the circle of persons familiar with that art;⁷ a general rule, indeed, but one especially applicable to this class of inventions.

§ 501. **The Description when the Invention is a Design.**

A design is an appearance imposed upon some physical substance for the purpose of making a given impression on the eye. Being addressed particularly to the sense of sight, it would hardly be expected that a correct and complete idea of this invention could be conveyed to the mind through words, which, though perhaps read by the eye, are really addressed to the ear. Still, so far as practicable, the written Description of a design must point out its characteristic qualities and accurately distinguish between what is claimed as new and what is conceded to be old.¹ Taken in connection with the drawings, it must impart to the public a knowledge of the design and of the method of producing it, as complete and available as is required respecting other classes of inventions. Where the design embraces two configurations, as in the obverse and the reverse of the same article, both may and ought to be described.² But if the shape impressed upon the substance endows it with new mechanical properties, as well as with a new appearance, only the latter should be embraced in the Description;³ the former, when constituting a new inven-

the qualities of his composition as given in the Description, but as they actually exist in the composition when produced according to his method, see *Goodyear v. N. Y. Gutta Percha & India Rubber Vulcanite Co.* (1862), 2 Fisher, 312.

⁷ That the Description of a chemical composition is not addressed to persons ignorant of chemistry, see *Allen v. Hunter* (1855), 6 McLean, 303.

§ 501. ¹ That a design can be delineated on paper, and known forms can be expressed in words, see *Ex parte Traitel* (1883), 25 O. G. 783.

That the Description of a design must

be clear, exact, and particular, see *Ex parte Niedringhaus* (1874), 7 O. G. 171.

² That both the obverse and reverse of a design may be described, see *Ex parte Diffenderfer* (1872), 2 O. G. 57.

³ That the Description of a design ought not to set forth the mechanical functions of the invention, see *Ex parte Norton* (1882), 22 O. G. 1205; *Ex parte Diffenderfer* (1872), 2 O. G. 57.

That a design application must confine itself to the characteristics of a design, not inserting those of a useful article, see *Ex parte Traitel* (1883), 25 O. G. 783.

tion, as it sometimes may, belonging to the class of manufactures, not designs.

§ 502. **The Description when the Invention is an Improvement.**

An improvement, although a complete invention in itself, is always dependent upon some original invention, without a knowledge of which, and of its relation to the improvement, the latter cannot be understood. The improvement in itself must, therefore, be described in all its essential characteristics like any other invention of its class; and in addition to this, the original invention, of whose idea of means this is a new development, must be delineated sufficiently to show the nature of the whole invention as improved.¹ With what

§ 502. ¹ In *Merrill v. Yeomans* (1876), 94 U. S. 568, Miller, J. : (570) "When a man supposes he has made an invention or discovery useful in the arts, and therefore the proper subject of a patent, it is, nine times out of ten, an improvement on some existing article, process, or machine, and is only useful in connection with it. It is necessary, therefore, for him, in his application to the Patent Office, to describe that upon which he engrafts his invention, as well as the invention itself; and, in cases where the invention is a new combination of old devices, he is bound to describe with particularity all these old devices, and then the new mode of combining them, for which he desires a patent. It thus occurs that, in every application for a patent, the descriptive part is necessarily largely occupied with what is not new, in order to an understanding of what is new." 11 O. G. 970 (971).

In *Isaacs v. Cooper* (1821), 4 Wash. 259, Washington, J. : (261) "The last, and by no means the least fatal, objection is to the patent and specification, which are so manifestly defective that the court ought not to interpose until the plaintiff shall have established his right at law, if he can do so. The pat-

ent is for an improvement on the horizontal wheel invented by the plaintiff. But what the nature of the invention was, upon which this is alleged to be an improvement, is not stated. Was it patented; and if not, is there any other source of information to which others can resort in order to find it out, so as to enable them to distinguish the improvement from the original invention, and in that way to discover in what the improvement consists? Neither the patent or specification affords the slightest information upon those points. The invention alluded to may, for aught that appears, be known to no other person than the plaintiff. How, then, can any human being, however skilful in the art, find out with certainty or even conjecture in what the improvement consists from the patent itself, or from the records in the Patent Office? If the original invention had been patented, the specification should at least have referred to and plainly described it. If it was not, it should have stated what that invention was, and in what the improvement consists. As the matter stands, the nature of the improvement is altogether unintelligible." 1 Robb, 332 (335).

Further, that a specification for an

particularity the old invention is to be portrayed depends upon the knowledge which those skilled in the art already have concerning it, and the obviousness of the relation which subsists between it and the new improvement. To put the entire invention, old and new, before the public, and at the same time to distinguish clearly between the old and the new, in order that it may appear that the claims of the inventor to an exclusive right are limited to the improvement, is the object to be accomplished.² This must be done by the Descrip-

improvement must describe the original sufficiently to distinguish the improvement from it, see *Wintermute v. Redington* (1856), 1 Fisher, 239; *Hovey v. Stevens* (1846), 3 W. & M. 17; 2 Robb, 567; *Brooks v. Jenkins* (1844), 3 McLean, 432; *Peterson v. Wooden* (1843), 3 McLean, 248; 2 Robb, 116; *Sullivan v. Redfield* (1825), 1 Paine, 441; 1 Robb, 477; *Dixon v. Moyer* (1821), 4 Wash. 68; 1 Robb, 324; *Kneass v. Schuylkill Bank* (1820), 4 Wash. 9; 1 Robb, 303; *Evans v. Hettick* (1818), 3 Wash. 408; 1 Robb, 166; *Evans v. Eaton* (1818), 3 Wash. 443; 1 Robb, 193; *Barrett v. Hall* (1818), 1 Mason, 447; 1 Robb, 207; *Lowell v. Lewis* (1817), 1 Mason, 182; 1 Robb, 131.

That the exact new feature must be described, see *Dangerfield v. Jones* (1865), 13 L. T. Rep. n. s. 142.

That the Description must show wherein the improvement consists and not merely the device as improved, see *Head v. Stevens* (1838), 19 Wend. 411; *Bovill v. Moore* (1816), Dav. P. C. 361; 1 Abb. P. C. 231; *McFarlane v. Price* (1816), 1 Web. 74; 1 Abb. P. C. 227; *Hornblower v. Boulton* (1799), 8 T. R. 95; 1 Abb. P. C. 98; *Williams v. Brodie* (1785), Dav. P. C. 96; 1 Web. 75.

² In *Evans v. Hettick* (1818), 3 Wash. 408, Washington, J. : (425) "What then is the plaintiff's invention, as asserted by the plaintiff, conceded by

the defendant, and sanctioned by the Supreme Court, in the case of *Evans v. Eaton*? The answer is, an improvement on the hopperboy, or an improved hopperboy, which that court have declared to be substantially the same. If this be so, then the section of the law before mentioned has declared that he must specify this improvement in full, clear, and exact terms. If he has not done so he has no valid patent on which he can recover. The English decisions correspond with the injunctions of our law. The American decisions, so far as we have any report of them, maintain the same doctrine. Mr. Justice Story, in the case of *Lowell v. Lewis*, lays it down that, 'if the patent be for an *improvement* in an existing machine, the patentee must in his specification distinguish the new from the old, and confine his patent to such parts only as are new; for, if both are mixed together, and a patent is taken for the whole, it is void.' What is the reason for all this? In the first place, it is to enable the public to enjoy the full benefit of the discovery, when the patentee's monopoly is expired, by having it so described upon record, that any person skilled in the art of which the invention is a branch may be able to construct it. The next reason is to put every citizen upon his guard, that he may not through ignorance violate the law, by infringing the rights of the patentee, and subjecting himself to the consequences of litigation.

tion and Claim in connection with the drawings and model, for it is not sufficient that by comparing the old and the im-

The inventor of the original machine, if he has obtained a patent for it, and all persons claiming under him, may lawfully enjoy the full benefit of that discovery, notwithstanding the improvement made upon it by a subsequent discoverer. If he has not chosen to ask for a monopoly, but abandons it to the public, then it becomes public property, and any person has a right to use it. The inventor of the improvement may also obtain a patent for his discovery, which cannot legally be invaded by the inventor of the original machine, or by any other person. The rights of each are secured by law, and there is no incompatibility between them. But if a man, wishing to use the original invention, and honestly disposed to avoid an infraction of the improver's right, is unable to ascertain from any certain and known standard where the original invention ends and where the improvement commences, how is it possible for him to exercise his own acknowledged right, freed from the danger of invading that of another? — and to what acts of oppression might not this lead? Might not the patentee of this mysterious improvement obtain from the ignorant, the timid, and even the prudent members of society, who wish to use the original discovery, the price he chooses to ask for a license to use his improvement, and in this way compel them to purchase it rather than incur expenses and inconveniences far greater than the sum demanded would pay for or compensate? If this may happen, then the improver enjoys in a degree the benefit of a discoverer both of the original machine and also of the improvement. In short, the patentee of the improvement may, to a certain extent, keep all others at arm's length as to the original invention, or make them

pay him for it in derogation of the rights of the inventor of the original machine." 1 Robb, 100 (184).

In *Evans v. Eaton* (1818), 3 Wash. 443, Washington, J.: (452) "3. An improvement on a former machine. This is a fair subject for a patent, and the plaintiff has laid before you strong evidence to prove that his hopperboy is a more useful machine than the one which is alleged to have been previously discovered and in use. If, then, you are satisfied of this fact, the point of law which has been raised by the defendant's counsel remains to be considered; which is, that the plaintiff's patent for an improvement is void, because the nature and extent of his improvement are not stated in his specification. The patent is for an improved hopperboy, as described in the specification which is referred to and made part of the patent. Now, does the specification express in what his improvement consists? It states all and each of the parts of the entire machine, — its use and mode of operating; and claims as his invention the machine, the peculiar properties or principles of it, viz. the spreading, turning, and gathering the meal, and the raising and lowering of its arm by its motion to accommodate itself to the meal under it. But does this description designate the improvement, or in what it consists? Where shall we find the original hopperboy described, either as to its construction, operation, or use, or by reference to anything by which a knowledge of it may be obtained? Where are the improvements on such original stated? The undoubted truth is that the specification communicates no information whatever upon any of these points. This being so, the law as to ordinary cases is clear that the plaintiff cannot recover for an improvement.

proved inventions, as they exist practically in the arts, the

The first section of the general Patent Law speaks of an improvement as an invention, and directs the patent to issue for his said invention. The third section requires the applicant to swear, or affirm, that he believes himself to be the true inventor of the art, machine, or improvement for which he asks a patent; and further, that he shall deliver a written Description of his invention, in such full, clear, and exact terms that any person acquainted with the art may know how to construct and use the same, etc. That it is necessary to the validity of a patent that the specification should describe in what the improvement consists is decided by Mr. Justice Story, in the cases referred to in the appendix to 3 Wheaton, and in the English cases of *Boulton v. Bull*, *Boville v. Moore*, *McFarlane v. Price*, *Harmar v. Playne*, and perhaps some others. What are the reasons upon which this doctrine is founded? They are to guard the public against unintentional infringements of the patent during its continuance, and to enable an artist to make the improvement by a reference to some known and certain authority, to be found among the records in the office of the Secretary of State, after the patent has run out. But it is contended by the plaintiff's counsel, that the law would be unreasonable to require, and therefore that it does not require, this to be done, unless the improvement is upon a *patented* machine, a description of which can be obtained by a reference to the records of the office of the Secretary of State, — that it might often be impossible for the patentee to discover, and consequently to describe, the parts of a machine in use, perhaps, only in some obscure part of the world. The answer to this is that an improvement necessarily implies an original, and unless the patentee is

acquainted with the original which he supposes he has improved, he must talk idly when he calls his invention an improvement. If he knows nothing of an original, then his invention is an original, or nothing; and the subsequent appearance of an original, to defeat his patent, is one of the risks which every patentee is exposed to under our law. As to the supposed distinction between an improvement on a machine patented and one not so, there is nothing in it. In both cases the improvement must be described, but with this difference, — that in the former case it may be sufficient to refer to the patent and specification for a description of the original machine, and then to state in what the improvements on such original machine consist — whereas in the latter case it would be necessary to describe the original machine and also the improvement. The reason for this distinction is too obvious to require explanation." 1 Robb, 193 (203).

That the specification of an improvement need not describe the original further than is necessary to understand the new matter, see *Many v. Jagger* (1848), 1 Blatch. 372; *Emerson v. Hogg* (1845), 2 Blatch. 1; *Harmar v. Playne* (1809), 11 East, 101; 1 Abb. P. C. 171.

That if the original is well known it need not be particularly described, nor even the mode of attaching the improvement to it if this is apparent without description, see *Loom Co. v. Higgins* (1882), 105 U. S. 580; 21 O. G. 2031.

That the Description must distinguish the old from the new, and binds the patentee as he makes it, see *Goodyear v. Railroad* (1853), 1 Fisher, 626; 2 Wall. Jr. 356.

That in order to distinguish old parts from new the specification may describe each and all the parts and then claim the whole when so constructed as to

nature of the latter and its characteristic differences from the former could be ascertained.³

§ 503. **The Description: its Sufficiency a Question of Fact.**

The sufficiency of the Description is a question of fact, to be investigated by experience, elucidated by evidence, and decided by a jury.¹ Only persons skilled in the art are usually capable of judging whether its delineations are correct, complete, and intelligible, and whether from it alone they could construct and use the invention. The inventor, having adopted it as his method of communicating his discovery to the public as represented by such persons, is bound by it and must abide the result of their endeavors to make the art or instrument available for practical use by following the directions he has given. But where a Description is, upon

produce the given effect, see *Gottfried v. Phillip Best Brewing Co.* (1879), 17 O. G. 675; 5 Bann. & A. 4.

That an application for an improvement must distinguish it from the original but need not disclaim the original, see *Ex parte Firm* (1887), 39 O. G. 1199.

³ That the specification for an improvement must describe its nature and extent, and it is not sufficient that by comparing the old and the improved machines the difference might be detected, see *Evans v. Eaton* (1822), 7 Wheat. 356; 1 Robb, 336; *Foxwell v. Bostock* (1864), 10 L. T. Rep. n. s. 144.

§ 503. ¹ In *Forbes v. Barstow Stove Co.* (1864), 2 Clifford, 379, Clifford, J.: (392) "The specifications are required for two principal purposes: first to inform the public what the thing is of which the patentee claims to be the inventor; and, secondly, to enable the public, after the expiration of the patent, to practise the invention from the specification, as therein described. Whether the patentee has described the subject-matter, or what he claims to have invented, so as to enable the public to know what his claim is, is in gen-

eral a question of law for the court on the construction of the patent. Cur. on P. § 130, p. 130. But whether he has described the invention in such full, clear, and exact terms as to enable the public to practise it from the specification is in general a question of fact to be determined, in common-law cases, by a jury. The act of Congress does not require the patentee to address himself to the uninformed upon the particular subject, but allows him to speak to persons of competent skill in the art; and it only 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 given in the specification."

See also *Page v. Ferry* (1857), 1 Fisher, 298; *Reutgen v. Kanowrs* (1804), 1 Wash. 168; 1 Robb, 1; *Morton v. Middleton* (1863), 1 Cr. S. 3d Series, 721; *Wallington v. Dale* (1852), 7 Exch. 888; *Beard v. Egerton* (1848), 19 L. J. C. P. 38; *Walton v. Bateman* (1842), 1 Web. 613; *Neilson v. Harford* (1841), 1 Web. 295; *Bickford v. Skewes* (1839), 1 Web. 214; *Hill v. Thompson* (1817), 1 Web. 235; 1 Abb. P. C. 299.

its face, so incomplete or unintelligible as to be evidently useless for purposes of public information, the court may decline to hear the testimony of witnesses and on its own judgment declare the patent void.²

SECTION VI.

OF THE APPLICATION: THE CLAIM.

§ 504. The Claim: its Objects and General Requisites.

It is the office of the Claim to define the limits of that exclusive use which is secured to the inventor by the patent, and thus to draw the line between those arts or instruments that are open to the public, and those whose employment by it is forbidden until the patent has expired. The Claim is, therefore, an essential part of the specification; and without it one of the two great purposes of that instrument would remain unfulfilled.¹ Hence the statutes require not only that the inventor shall fully *describe* his invention in the specification, so that any person skilled in the art can practise it, but also that he shall "particularly point out and distinctly *claim* the part, improvement, or combination which he claims as his invention or discovery." And the rules of the Patent Office prescribe that the specification shall conclude with a specific and distinct Claim or Claims of every separate sub-

² In *Wood v. Underhill* (1847), 5 How. 1, Taney, C. J.: (4) "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 de-

clare the patent to be void. And the same rule would prevail where it was apparent that the proportions were stated ambiguously and vaguely." 2 Robb, 588 (593).

See also *Brooks v. Jenkins* (1844), 3 McLean, 432.

§ 504. ¹ That where there is no Claim there is no application, see *Ex parte Lasscell* (1884), 28 O. G. 1274; 29 O. G. 861; *Ex parte Holt* (1884), 29 O. G. 171.

That a thing is not claimed when shown only in the drawings and not in the Description or Claim, see *Couse v. Johnson* (1879), 16 O. G. 719.

ject-matter that the applicant desires to protect by the patent for which he has applied.²

§ 505. **The Claim the Life of the Patent and the Measure of the Patent Privilege.**

The Claim is thus the life of the patent so far as the rights of the inventor are concerned, and by it the letters-patent, as a grant of an exclusive privilege, must stand or fall.¹ The

² That each Claim is an independent patent, see *Celluloid Mfg. Co. v. Zylonite Brush & Comb Co.* (1880), 27 Fed. Rep. 291; 35 O. G. 1228; *United Nickel Co. v. California Electrical Works* (1885), 25 Fed. Rep. 475; 11 Sawyer, 250.

§ 505. ¹ In *Railroad Co. v. Mellon* (1881), 104 U. S. 112, Woods, J.: (117) "The act of July 4, 1836, c. 357 (5 Stat. 117), under which this patent was issued, requires that an applicant for a patent shall not only 'deliver a written description of his invention or discovery,' but 'shall also particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery.' This provision is substantially re-enacted in the act of July 8, 1870, c. 230 (16 Stat. 198), Rev. Stat. sect. 4838, and remains in force. As a rule, therefore, the specification filed with the application for letters-patent contains a general Description of the invention sought to be patented, which is followed by what is technically called the 'Claim.' In reference to this latter part of the specification this court, speaking by Mr. Justice Bradley, has said: 'It is well known that the terms of the Claim in letters-patent are carefully scrutinized in the Patent Office. Over this part of the specification the chief contest generally arises. It defines what the Office, after a full examination of previous inventions and the state of the art, determines the applicant is entitled to.' *Burns v. Meyer*, 100 U. S. 671.

See also *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 id. 274, 278. In view, therefore, of the statute, the practice of the Patent Office, and the decisions of this court, we think that the scope of letters-patent should be limited to the invention covered by the Claim, and that though the Claim may be illustrated, it cannot be enlarged by the language used in other parts of the specification." 20 O. G. 1891 (1892).

In *Masury v. Anderson* (1873), 11 Blatch. 162, Blatchford, J.: (165) "The rights of the plaintiff depend upon the Claim in his patent, according to its proper construction, and not upon what he may erroneously suppose it covers. If at one time he insists on too much, and at another on too little, he does not thereby work any prejudice to the rights actually secured to him." 6 Fisher, 457 (460); 4 O. G. 55 (56).

In *Pitts v. Wemple* (1855), 1 Bissell, 87, Drummond, J.: (90) "The Patent Law requires the inventor to set forth the nature and extent of his discovery, so that, by referring to his letters-patent, a mechanic of competent skill may be able, in the state of the art as then understood, to construct the machine or improvement, if the invention relate to a machine. And he must particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery. He is restricted to this Claim. It is true that the whole patent, including specifications and drawings, is to be taken into considera-

thing patented is the thing claimed, whatever the patentee may suppose or assert that he has invented; and though the statement of the Claim comes short of the true limits of the invention, the inventor must abide by them, as he has described and published them in this written definition of its character and scope.² The courts will not go into the history of the art

tion, but we look at them only for the purpose of placing a proper construction upon the Claim.' 2 Fisher, 10 (13).

That a patent must stand or fall by its Claims, see *Meissner v. Devoo Mfg. Co.* (1872), 2 O. G. 545; 5 Fisher, 285; 9 Blatch. 333; *Parker v. Sears* (1850), 1 Fisher, 93.

That where the only patentable feature in the invention is dormant and unclaimed the patent is invalid, see *Ingham v. Pierce* (1887), 31 Fed. Rep. 822; 42 O. G. 1062.

That the scope of a patent is governed by the Claim, see *Yale Lock Co. v. Greenleaf* (1886), 117 U. S. 555; 35 O. G. 386; *Ex parte Holt* (1884), 29 O. G. 171.

That if the Claim does not define the invention the courts can give no relief, see *Delaware Coal & Ice Co. v. Packer* (1880), 24 O. G. 1273; 1 Fed. Rep. 851; 5 Bann. & A. 296.

That the identity of patents is determined by their Claims, see *Adams v. Bellaire Stamping Co.* (1886), 28 Fed. Rep. 360; 36 O. G. 567; *McMillin v. Rees* (1880), 17 O. G. 1222; 1 Fed. Rep. 722; 5 Bann. & A. 269.

That where a Claim sets forth a certain arrangement as essential, no other arrangement is the same invention, see *Tate v. Thomas* (1885), 30 O. G. 345.

² That the invention patented is the invention set forth in the Claim, and that only, see *Toohy v. Harding* (1880), 4 Hughes, 253; 1 Fed. Rep. 174; *McMillin v. Rees* (1880), 5 Bann. & A. 269; 17 O. G. 1222; 1 Fed. Rep. 722; *Delaware Coal & Ice Co. v. Packer* (1880), 5 Bann. & A. 296; 24 O. G.

1273; 1 Fed. Rep. 851; *Ex parte Emerson* (1880), 17 O. G. 1451; *Couso v. Johnson* (1870), 4 Bann. & A. 501; 16 O. G. 719; *Ex parte Locke* (1870), 16 O. G. 1140; *Keystone Bridge Co. v. Phoenix Iron Co.* (1877), 95 U. S. 274; 12 O. G. 980; *Welling v. Rubber Coated Harness Trimming Co.* (1875), 2 Bann. & A. 1; 7 O. G. 608; *Fuller v. Yentzer* (1874), 6 Bissell, 203; 1 Bann. & A. 520; *Wheeler v. McCormick* (1873), 4 O. G. 692; 6 Fisher, 551; 11 Blatch. 334; *Brown v. Hinkley* (1873), 3 O. G. 384; 6 Fisher, 370; *Rich v. Close* (1870), 4 Fisher, 279; 8 Blatch. 41; *Haselden v. Ogden* (1868), 3 Fisher, 378; *Blake v. Stafford* (1868), 3 Fisher, 294; 6 Blatch. 195; *Hayden v. Suffolk Mfg. Co.* (1862), 4 Fisher, 86; *Morris v. Barrett* (1859), 1 Bond, 254; 1 Fisher, 461; *Johnson v. Root* (1858), 1 Fisher, 351; *Sickels v. Gloucester Mfg. Co.* (1856), 1 Fisher, 222; *Rich v. Lippincott* (1853), 2 Fisher, 1; *O'Reilly v. Morse* (1853), 15 How. 62; *Kneass v. Schuylkill Bank* (1820), 4 Wash. 9; 1 Robb, 303.

That the claimed invention alone is covered by the patent, though it be less than the real invention, see *Brass Co. v. Miller* (1871), 5 Fisher, 48; 9 Blatch. 77; *Kidd v. Spence* (1859), 4 Fisher, 37; *Detmold v. Reeves* (1851), 1 Fisher, 127.

That parts which are indispensable to the invention are not covered by the patent unless mentioned in the Claim, see *McMillin v. Rees* (1880), 5 Bann. & A. 269; 17 O. G. 1222; 1 Fed. Rep. 722.

That if a patentee inserts an unes-

to ascertain what he has really discovered and what he might have patented if he had chosen, but will take him at his word and protect him according to the terms in which he has himself demanded such protection.³ Even where he confines the language of his Claim to a mere reference to the letters affixed to the drawings, the rigidity of the rule is not relaxed, and only the devices shown in the drawings thus referred to are regarded as constituting his invention.⁴

essential feature in his Claim he cannot afterwards deny its materiality, see *Le Fever v. Remington* (1882), 21 Blatch. 80; 22 O. G. 1537; 13 Fed. Rep. 86.

³ In *Keystone Bridge Co. v. Phoenix Iron Co.* (1877), 95 U. S. 274, Bradley, J. : (278) "When a Claim is so explicit, the courts cannot alter or enlarge it. If the patentees have not claimed the whole of their invention, and the omission has been the result of inadvertence, they should have sought to correct the error by a surrender of their patent and an application for a re-issue. They cannot expect the courts to wade through the history of the art, and spell out what they might have claimed, but have not claimed. Since the act of 1836, the patent laws require that an applicant for a patent shall not only, by a specification in writing, fully explain his invention, but that he 'shall particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery.' This provision was inserted in the law for the purpose of relieving the courts from the duty of ascertaining the exact invention of the patentee by inference and conjecture, derived from a laborious examination of previous inventions, and a comparison thereof with that claimed by him. This duty is now cast upon the Patent Office. There his Claim is, or is supposed to be, examined, scrutinized, lim-

ited, and made to conform to what he is entitled to. If the Office refuses to allow him all that he asks, he has an appeal. But the courts have no right to enlarge a patent beyond the scope of its Claim as allowed by the Patent Office, or the appellate tribunal to which contested applications are referred. When the terms of a Claim in a patent are clear and distinct (as they always should be), the patentee, in a suit brought upon the patent, is bound by it. *Merrill v. Yeomans*, 94 U. S. 568. He can claim nothing beyond it. . . . (279) As patents are procured *ex parte*, the public is not bound by them, but the patentees are. And the latter cannot show that their invention is broader than the terms of their Claim; or, if broader, they must be held to have surrendered the surplus to the public." 12 O. G. 980 (981).

That the court will not go into the history of the art, but will abide by the Claims, see *James v. Campbell* (1882), 104 U. S. 356; 21 O. G. 337.

That the court will not enlarge the Claim by the Description, see *Yale Lock Co. v. Greenleaf* (1886), 117 U. S. 554; 35 O. G. 386; *Lehigh Valley R. R. Co. v. Mellon* (1881), 104 U. S. 112; 20 O. G. 1891.

⁴ That if a Claim is a mere reference to the drawings, only the device shown in the drawings is protected, see *Ex parte Marsh* (1872), 2 O. G. 197.

§ 506. The Claim: its Effect, as an Abandonment or otherwise, upon the Matter not Claimed.

As a consequence of this limitation of the patent to the matter claimed, all matters not claimed are considered as excluded from the particular invention which forms the subject of the application. It has been sometimes stated that a failure to claim an art or device admits it to be old;¹ or, if it is really new, that the omission to protect it abandons it to the public.² These statements need qualification. From the nature of the invention itself all that is essential to it must be new, and it can properly be claimed only by excluding all that is old. But it does not follow that other features, described in the specification and omitted from the Claim, are already known to the public; for it may often happen that each one of several new inventions can be understood only by describing it in connection with the others. Nor is it true that by thus describing and not claiming any one of them, the inventor, *ipso facto*, dedicates it to the public use. He is at liberty to patent each of them, if he desires to do so, either in separate patents, or in the same patent when their joinder would be consistent with the rules relating to that subject; and the patenting of one before he makes an application for the others cannot be regarded as abandoning the rest unless this be his intention, as shown by all the circumstances of

§ 506. ¹ That to describe and not claim admits the unclaimed matter to be old, see *Rowell v. Lindsay* (1881), 19 O. G. 1565; 10 Bissell, 217; 6 Fed. Rep. 290; *Corn Planter Patent* (1874), 23 Wall. 181; 6 O. G. 392; *Kirby v. Dodge & Stevenson Mfg. Co.* (1872), 10 Blatch. 307; 6 Fisher, 156; 3 O. G. 181; *Conover v. Roach* (1857), 4 Fisher, 12; *Winans v. N. Y. & Erie R. R. Co.* (1856), 1 Fisher, 213.

² That failure to claim described matter dedicates it to the public, see *Swift v. Jenks* (1884), 19 Fed. Rep. 641; 27 O. G. 621; *Miller v. Brass Co.* (1881), 104 U. S. 350; 21 O. G. 201; *Giant Powder Co. v. California Vigorit Powder Co.* (1880), 18 O. G. 1339; 6

Sawyer, 508; 4 Fed. Rep. 720; *Batten v. Taggart* (1851), 2 Wall. Jr. 101.

That the claiming of one specific device, and the omission to claim others which are apparent on the face of the specification, is an abandonment of the latter, see *Hill v. Commissioner* (1885), 33 O. G. 757; 4 Mackay, 266.

That the claiming of a specific device, and an omission to claim other devices apparent on the face of the Description, is a dedication of the latter, unless the patentee surrenders, proves inadvertence, etc., and re-issues with due diligence, see *Combined Patents Can Co. v. Lloyd* (1882), 15 Phila. 481; 21 O. G. 713; 11 Fed. Rep. 149; *Miller v. Brass Co.* (1881), 104 U. S. 350; 21 O. G. 201.

the case or by that public use or sale from which the law presumes such an abandonment. To describe and not to claim is a proper method of admitting that to be old which really is old. It is also a proper method of abandoning new inventions to the public, when such is the evident intention of the inventor. It is also a proper method of distinguishing the new invention, which forms the subject-matter of the present application, from other new inventions which are to be the subject-matter of future applications.³ The sole inevitable conclusion from the omission is that the omitted features do not enter into the essence of the present invention, and are not claimed as protected by the present patent.⁴ What further conclusions may be drawn from it depends on other considerations, relating either to the novelty of the omitted feature in itself, or to its actual or presumed abandonment by its inventor.

§ 507. The Claim: its Form and Contents Governed by Strict Rules.

The paramount importance of the Claim, and the necessity for such exactness and completeness in its statements as will precisely define the invention to be protected by the patent, have led to the establishment of numerous rules for framing it, some of which are common to all classes of inventions, while others have reference to particular classes. These

³ That to describe and not claim is a method of postponing the unclaimed matter for a future patent, see *Ex parte Emerson* (1880), 17 O. G. 1451; *Giant Powder Co. v. California Vigorit Powder Co.* (1880), 18 O. G. 1339; 6 Sawyer, 508; 4 Fed. Rep. 720; *Corn Planter Patent* (1874), 23 Wall. 181; 6 O. G. 392.

That the description of a process in an application for a machine patent does not abandon the process to the public if the process patent be applied for within two years, see *Eastern Paper Bag Co. v. Standard Paper Bag Co.* (1887), 30 Fed. Rep. 63; 41 O. G. 231.

That where an applicant intends to obtain a future patent for the matter

described but not claimed in the present application, he must expressly reserve in this one the right to do so, and apply for the other within a reasonable time, see *Ex parte Roberts* (1887), 40 O. G. 573; *Adams v. Bellaire Stamping Co.* (1886), 28 Fed. Rep. 360; 36 O. G. 567; *Ex parte Derby* (1884), 26 O. G. 1208; *James v. Campbell* (1882), 104 U. S. 353; 21 O. G. 337.

⁴ That a failure to claim described matter simply excludes it from the patent, leaving it to be covered by a subsequent patent or not, at the option of the inventor without any previous reservation, see *Corn Planter Patent* (1874), 23 Wall. 181; 6 O. G. 392; and cases cited in the notes to §§ 465, 466, *ante*.

general rules relate to the contents, the form, the joinder, and the construction of Claims. Those which govern the contents of a Claim, prescribing what it must include, what it must omit, and what may be included or omitted at the option of the inventor, will be first discussed.

§ 508. **The Claim must Claim a Practically Operative Means.**

Every Claim must set forth and claim a practically operative means.¹ An inventor is not obliged to claim all that he may have invented.² His idea of means may be susceptible of different stages of development, the more advanced of which it may not yet seem proper to him to disclose. Or his invention may embrace subordinate inventions, which he may determine either to surrender to the public or to reserve for the protection of future patents. But he must, at least, so far describe and claim what he has invented as to place before the public, and to ask protection for, some art or instrument capable of practical use.³ Nothing less than this is a patentable invention, and no Claim can be sustained unless

§ 508. ¹ That a Claim must be for an operative means, see *Ex parte* Cornell (1872), 1 O. G. 573; *American Pin Co. v. Oakville Co.* (1854), 3 Blatch. 190.

That a Claim for certain devices as the means for producing a certain result is proper, though under some circumstances they will not so operate, see *Wheeler v. Clipper Mower & Reaper Co.* (1872), 10 Blatch. 181; 6 Fisher, 1; 2 O. G. 442.

² That the Claim may be as narrow as the patentee chooses, if it covers an operative means, see *Ex parte* Emerson (1880), 17 O. G. 1451; *Russell & Erwin Mfg. Co. v. Mallory* (1872), 2 O. G. 495; 5 Fisher, 632; 10 Blatch. 140.

That the inventor need not claim all he describes, though new, provided that which he claims will operate apart from the rest, though thereby he may secure the whole, see *Ex parte* Sturges (1872), 1 O. G. 204.

That a Claim for an entire invention

will be taken as covering all that is described as entering into the invention unless the Claim itself shows the contrary, see *Evans v. Kelly* (1880), 5 Bann. & A. 71; 9 Bissell, 251; 23 O. G. 192; 13 Fed. Rep. 903; *Tetley v. Easton* (1883), Macrory's P. C. 82.

³ That the Claim must be for matter so described that any one skilled in the art can use it, see *Vogler v. Semple* (1877), 11 O. G. 923; 7 Bissell, 382; 2 Bann. & A. 556.

That an article patentable only when used in certain connections must be claimed only as to such connections, see *Stewart v. Mahoney* (1876), 5 Fed. Rep. 302; 4 Bann. & A. 84.

That the occasional accidental operation of a device, varying from its usual operation, and inconsistent with its principle, is not a basis for a Claim for a device uniformly producing similar effects, see *Voelker v. Gray* (1885), 30 O. G. 1091.

the exclusive privilege which it endeavors to define is one which can lawfully be granted.

§ 509. **The Claim must Claim a Concrete Art or Instrument.**

Again, every Claim must be for a concrete invention. Patents are not granted for the protection of abstract ideas or scientific theories, but for practical arts to be performed, or for physical instruments available for use on physical objects.¹ Underlying every invention is the idea of means of which the operative art or instrument is the tangible embodiment; and ultimately this idea of means receives complete protection from the patent. But the thing patented is the concrete expression of this idea, the art or mechanism or product in which the idea is reduced to practice; and it is this which must be set forth in the Claim, in distinction from the discovery or conception which it embodies.

§ 510. **The Claim must Claim a Single and Distinct Invention.**

Again, every Claim must be confined to some single and distinct invention. Two arts or instruments cannot be embraced in one Claim.¹ Where a general invention is capable of modifications which differ substantially from each other, embodying different ideas of means or the same idea in different stages of development, each one of these is a distinct invention, and if claimed at all must be claimed separately

§ 509. ¹ That the Claim must state a concrete invention, not an abstraction, see *Ex parte* Designolle (1877), 13 O. G. 227; *Burr v. Duryee* (1863), 1 Wall. 531.

That the Claim must not cover a principle, see *Ex parte* Fairbanks (1873), 3 O. G. 65; *Burr v. Duryee* (1863), 1 Wall. 531; *Walton v. Bateman* (1842), 1 Web. 613.

That a Claim for the use of a natural force for a special purpose is improper, — the special method of using it for such purpose must alone be claimed, — see *O'Reilly v. Morse* (1853), 15 How. 62.

That general truths and forces belong

to all men, and cannot be claimed, see *Opinion Atty. Gen.* (1856), 8 Op. At. Gen. 269; *Detmold v. Reeves* (1851), 1 Fisher, 127.

See §§ 133-143 and notes, *ante*.

§ 510. ¹ That but one invention can be embraced in a single Claim, see *Ex parte* Bland (1879), 15 O. G. 775.

That a process and its product cannot be embraced in a single Claim, see *Ex parte* Bates (1879), 16 O. G. 266; *Merrill v. Yeomans* (1874), 1 Bann. & A. 47; 5 O. G. 267; *Holmes*, 331.

That a machine and its product, an art and its apparatus, etc., cannot be covered by one Claim, see *Ex parte* Bates (1879), 16 O. G. 266.

from the rest. When the parts of a device, as well as the device itself, are new inventions, the device as a whole and each subordinate part of it must be made the subject of as many separate Claims. Thus every Claim becomes complete within itself; exactly commensurate with the single invention it purports to cover, and capable of being allowed or disallowed in the Patent Office, and sustained or defeated in the courts, without prejudice to any other invention than the one therein specifically described.

§ 511. The Claim must Indicate the Class of Patentable Inventions to which the Claimed Invention Belongs.

Again, every Claim must define the invention it includes in such a manner as to indicate the class of inventions to which it belongs. While the Claim need not state in terms whether the invention claimed is an art, a machine, a manufacture, a composition of matter, a design, or an improvement, it must be apparent to which of these great classes the invention does pertain.¹ Thus, if the real invention is an art or process, it must be claimed as such and not as the means by which the art is practised, nor as the product in which it results.² If it is a machine, the mechanism, not the mode of operating it, is the true subject-matter of the Claim.³

§ 512. The Claim must Precisely Define the Invention Claimed.

Again, every Claim must precisely define the exact limits of the invention claimed.¹ This may be done by the enumeration

§ 511. ¹ That the Claims of a patent must clearly show whether the claimed invention is an art, machine, manufacture, composition, design, or improvement, see *Ex parte Mayall* (1873), 4 O. G. 210.

² That an apparatus must be claimed as such, not as a means for practising the art, see *Ex parte Bates* (1879), 16 O. G. 266.

That the exact invention, not the art of using it, must be claimed, see *Ex parte Cornell* (1872), 1 O. G. 573.

³ That a machine must be claimed as

such, not as a "mode of operation," see *Hatch v. Moffitt* (1883), 15 Fed. Rep. 252; *Burr v. Duryee* (1863), 1 Wall. 531.

That where an effect is produced by mechanical means, the means should ordinarily be claimed as a machine or manufacture, not as a process, see *Piper v. Brown* (1870), 4 Fisher, 175; *Holmes*, 20. See also § 529 and notes, *post*.

§ 512. ¹ That the claimed invention must be precisely and completely covered by the Claim, see *Ex parte Thompson* (1879), 16 O. G. 588; *Ex parte*

of its essential characteristics, or, when these are fully stated in the Description, by such a delineation of the invention claimed as identifies it with the one described.² When the invention is a complete art or instrument, new and patentable in itself without relation to other things, it must be claimed as such without any reference to the objects or the purposes for which it may be employed.³ On the other hand, where

Funck (1878), 14 O. G. 158; Scott v. Ford (1878), 14 O. G. 413; Merrill v. Yeomans (1877), 94 U. S. 568; 11 O. G. 970; *Ex parte* Hopper (1872), 2 O. G. 4; Davis v. Bell (1837), 8 N. H. 500; Whittemore v. Cutter (1813), 1 Gallison, 478; 1 Robb, 40; Rushton v. Crawley (1870), L. R. 10 Eq. 522; Gibson v. Brand (1842), 1 Web. 613; Carpenter v. Smith (1841), 1 Web. 530.

That each substantially different modification of the invention which the inventor intends to protect must be definitely described, see Sargent v. Carter (1857), 1 Fisher, 277.

That if the patentee intends to claim only a part of what he has described as entering into the invention the Claim must show it, or all will be considered as claimed, see Evans v. Kelly (1880), 5 Bann. & A. 71; 9 Bissell, 251; 23 O. G. 192; 13 Fed. Rep. 903; Tetley v. Easton (1857) 2 C. B. N. s. 706.

That where the invention is described as consisting in the peculiar construction of one or more parts only such construction can be claimed, see Phoenix Caster Co. v. Spiegel (1886), 26 Fed. Rep. 272.

That the adjunctive devices referred to in all the Claims for an invention must be the same in themselves and in their relation to the invention, see *Ex parte* Stanbridge (1888), 43 O. G. 1345.

² That the enumeration of such elements as constitute the operative invention is a proper mode of claiming it, see *Ex parte* Farrow (1872), 2 O. G. 57.

That elements not essential to the invention should not be stated in the

Claim, see *Ex parte* Kitson (1881), 20 O. G. 1750; *Ex parte* Farrow (1872), 2 O. G. 57; Furbush v. Cook (1857), 2 Fisher, 668.

That when the new invention does not embrace the entire concrete art or instrument only the new parts invented must be stated by the Claim, see Seymour v. Osborne (1870), 11 Wall. 516.

That when a device as claimed is useful only as part of a whole, the other parts will be understood as implied in the Claim, see *Ex parte* West (1872), 2 O. G. 30.

That elements which are described as essential to the invention are not covered by the patent unless stated or implied in the Claim, see *McMillin v. Rees* (1880), 5 Bann. & A. 269; 17 O. G. 1222; 1 Fed. Rep. 722.

³ That a Claim must not include any parts, features, or other matters not embraced in the invention intended to be claimed, see *Ex parte* Skinner (1881), 19 O. G. 662; *Ex parte* Wheat (1879), 16 O. G. 360; *Ex parte* Wilber (1872), 1 O. G. 379.

That if new devices are claimed as specifically arranged, the Claim covers them only when thus arranged, see Tate v. Thomas (1885), 30 O. G. 345; Carlton v. Bokee (1873), 17 Wall. 463; 6 Fisher, 40; 2 O. G. 520.

That what is described as merely auxiliary must not be claimed, see *Ex parte* Wheat (1879), 16 O. G. 360.

That a Claim covering useless things is not void unless they are claimed as essential to the invention, see Lewis v.

the invention is new and patentable only when considered with reference to certain purposes or objects, it must be claimed only in connection with such purposes or objects, and a Claim for it without this limitation would be void.⁴ The importance of this rule becomes especially evident in cases where the real invention consists in the new use of some art or instrument already known. A Claim for the art or instrument itself would be improper, since the new use does not change its character as a patentable invention. The use itself must be set forth and claimed, this being the only new product of inventive skill; and in the Claim for this new use, the objects upon which the art or instrument is now to be employed, or the mode of operation in which it is now to be applied, must be particularly described.

§ 513. The Claim must Distinguish the Invention Claimed from all Known Inventions.

Again, every Claim must distinguish the art or instrument which it embraces from every art or instrument already known.¹

Marling (1829), 1 Web. 493; 1 Abb. P. C. 421.

That a Claim for certain devices as a means to produce certain results is good, though under peculiar circumstances the results would not follow, see *Wheeler v. Clipper Mower & Reaper Co.* (1872), 10 Blatch. 181; 6 Fisher, 1; 2 O. G. 442.

⁴ That if the invention is patentable only when used in certain connections, it must be claimed only in such connections, see *Stewart v. Mahoney* (1879), 5 Fed. Rep. 302; 4 Bann. & A. 84.

§ 513. ¹ In *Ex parte Funck* (1878), 14 O. G. 158, Spear, Com. : (159) "The office of the Claim is to clearly and distinctly set forth what an applicant regards to be peculiarly his own invention. If the improvement consists in some addition to or alteration of an existing structure, whether it be by the introduction of new features having no

conjoint function with the old parts, or by substantial re-organization in which new elements may or may not enter as co-operative factors, in either event the Claim should express no more and no less than is necessary to convey an accurate understanding of the actual invention which had been made. If, for example, an additional feature, valuable in its way, and yet entirely independent of the old elements, so far as co-acting with them, is incorporated in a device, it must be manifest that the Claim should cease when it had specified the single feature. To continue beyond this, and enumerate other parts belonging to the old structure improved upon, is as much an offence against clearness and precision as to state, as elements of a combination Claim, parts which have no office whatever to perform in accomplishing the specific result. The retention of the old elements in the Claim, when there is nothing in common be-

A Claim including any matter before patented, or in possession of the public, is fatally defective. Such matter should not be mentioned in the Claim if the invention claimed can be sufficiently defined without it, and if mentioned must be expressly disclaimed.² Though the invention is worthless

tween them and the one newly added to the machine, is a misstatement of the invention, giving a fictitious importance to the improvement, and defeating any accurate judgment of its merit because of the obscurity resulting from the erroneous association."

In the Corn Planter Patent (1874), 23 Wall. 181, Bradley, J.: (223) "It is objected to several of the patents under consideration that they do not state what parts of the machine patented are new and what parts are old, and that they are therefore void. There is nothing in the Patent Law which, in terms, requires the patentee to do this. The language of the act of 1836, under which these patents were drawn, is that before any inventor shall receive a patent for his invention or discovery he shall deliver a description thereof, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms as to enable a person skilled in the art to reproduce it; and the act directs that the inventor shall 'particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery.' This, of course, involves an elimination of what he claims as new from what he admits to be old. But what can be a more explicit declaration of what is new and what is old than the summary of the patentee's claim at the close of the specification, if that is made in clear and distinct terms, or in terms so clear and distinct as to be fairly understood. It implies that all the rest is old, or, if not old, that the applicant does not claim it so far as that patent is concerned. If the patentee by his specifi-

cation, including the summary Claim at its close, points out and distinguishes what he claims as his own invention, it is all that is required. That, if we can find it without difficulty or embarrassment, is what he claims as new; the rest he impliedly, if he does not expressly, disclaims as old. No particular form of words is necessary if the meaning is clear." 6 O. G. 392 (400).

That the Claim must clearly distinguish between the new matter and the old, see *Terry Clock Co. v. New Haven Clock Co.* (1878), 17 O. G. 908; 3 Bann. & A. 332; *Ex parte Hobson* (1872), 1 O. G. 141; *Brown v. Selby* (1871), 2 Bissell, 457; 4 Fisher, 363; *Bray v. Hartshorn* (1860), 1 Clifford, 538; *Hovey v. Stevens* (1846), 3 W. & M. 17; 2 Robb, 567; *Dangerfield v. Jones* (1865), 13 L. T. Rep. n. s. 142; *Newall v. Elliott* (1864), 10 Jur. n. s. 954; *Booth v. Kennard* (1857), 2 H. & N. 84; *Holmes v. London & N. W. R. R. Co.* (1852), *Macrory's P. C.* 13; *Crane v. Price* (1842), 4 M. & G. 580; *Carpenter v. Smith* (1841), 1 Web. 530; *McFarlane v. Price* (1816), 1 Web. 74; 1 Abb. P. C. 227; *Manton v. Manton* (1815), *Dav. P. C.* 333; 1 Abb. P. C. 189.

That the new and old may be distinguished by describing both and claiming only the former, see *Rowell v. Lindsay* (1881), 19 O. G. 1565; 10 Bissell, 217; 6 Fed. Rep. 290; *Gottfried v. Phillip Best Brewing Co.* (1879), 17 O. G. 675; 5 Bann. & A. 4; *Corn Planter Patent* (1874), 23 Wall. 181; 6 O. G. 392; *Winans v. N. Y. & Erie R. R. Co.* (1856), 1 Fisher, 213; and other cases cited in § 506, note 1, *ante*.

² That a Claim including old matter

apart from certain other arts or instruments before communicated to the public the Claim should not describe them, for to whatever extent its utility may be dependent upon its connection with them they form no portion of its essence as a patentable invention.

§ 514. The Claim must Set Forth the Invention Claimed in its Most Perfect Concrete Form.

Again, every Claim must set forth the invention it purports to describe in that form which, according to the judgment of the inventor, the most perfectly embodies it. An inventor who seeks protection for his invention from the public is obliged to place it before the public in the form best fitted for practical use, and both in his Description and his Claim it is his duty to disclose his conception through that concrete

is void, see *Milligan v. Lalanco & Grosjean Mfg. Co.* (1884), 29 O. G. 367 ; 21 Fed. Rep. 570 ; *Maguire v. Eames* (1880), 18 Blatch. 321 ; 8 Fed. Rep. 761 ; *Scott v. Ford* (1878), 14 O. G. 413 ; *Ex parte Funck* (1878), 14 O. G. 158 ; *Corn Planter Patent* (1874), 23 Wall. 181 ; 6 O. G. 392 ; *Blake v. Stafford* (1868), 3 Fisher, 294 ; 6 Blatch. 195 ; *Phillips v. Page* (1860), 24 How. 164 ; *Holliday v. Rheem* (1852), 18 Pa. St. 465 ; *Hovey v. Stevens* (1846), 3 W. & M. 17 ; 2 Robb, 567 ; *Davis v. Bell* (1837), 8 N. H. 500 ; *Whitney v. Emmett* (1831), Baldwin, 303 ; 1 Robb, 567 ; *Watson v. Bladen* (1826), 4 Wash. 580 ; 1 Robb, 510 ; *Sullivan v. Redfield* (1825), 1 Paine, 441 ; 1 Robb, 477 ; *Kneass v. Schuylkill Bank* (1820), 4 Wash. 9 ; 1 Robb, 303 ; *Thomas v. Foxwell* (1858), 5 Jur. n. s. 37 ; *Gamble v. Kurtz* (1846), 3 C. B. 425 ; *Minter v. Mower* (1837), 1 Web. 138 ; 2 Abb. P. C. 178 ; *Campion v. Benyon* (1821), 6 Moore, 71 ; 1 Abb. P. C. 345 ; *Brunton v. Hawkes* (1821), 4 B. & Ald. 541 ; 1 Abb. P. C. 336 ; *Hill v. Thompson* (1817), 1 Web. 235 ; 1 Abb. P. C. 299 ; *Bovill v. Moore* (1816), Dav. P. C. 361 ;

1 Abb. P. C. 231 ; *Huddart v. Grimshaw* (1803), 1 Web. 85 ; 1 Abb. P. C. 128 ; *R. v. Else* (1785), 1 Web. 76 ; 1 Abb. 40.

That a Claim covering old matter is void, though the applicant has invented a new part which is useless without the old, see *Winans v. N. Y. & Erie R. R. Co.* (1856), 1 Fisher, 213.

That a Claim for the whole device, where the invention is merely an improvement, claims old matter and is void, see *Maguire v. Eames* (1880), 18 Blatch. 321 ; 8 Fed. Rep. 761 ; *Sullivan v. Redfield* (1825), 1 Paine, 441 ; 1 Robb, 477.

That a Claim covering three things, one being old, is void, see *Heinrich v. Luther* (1855), 6 McLean, 345.

That a Claim covering old matter is curable by disclaimer, see *Hovey v. Stevens* (1846), 3 W. & M. 17 ; 2 Robb, 567. See also §§ 537, 642-646, and notes, *post*.

That a disclaimer in a pending application must explain, not contradict, the Claim, and distinguish the new from the old, see *Ex parte Hobson* (1872), 1 O. G. 141.

art or instrument which most accurately expresses his idea. Having done this, all other forms are presumed to be embraced in the one claimed, unless they are disclaimed.¹ Thus a Claim for the making of an instrument or the doing of an act, describing the best mode of making the one or doing the other, covers all modes in which the former can be made or the

§ 514. ¹ In *Murphy v. Eastham* (1872), 2 O. G. 61, Shepley, J. : (62) "The patentee does not, as is sometimes done, claim in terms the thing patented, however its form and proportions may be varied ; but the law so interprets his Claim without the addition of these words. In contemplation of law, after he has fully described his invention and shown its principles, and claimed it in a form which perfectly embodies it, unless he disclaims other forms he is deemed to claim every form in which his invention may be copied." 5 Fisher, 306 (309) ; Holmes, 113 (116).

In *Winans v. Denmead* (1853), 15 How. 330, Curtis, J. : (343) "Patentees sometimes add to their Claims an express declaration, to the effect that the Claim extends to the thing patented, however its form or proportions may be varied. But this is unnecessary. The law so interprets the Claim without the addition of these words. The exclusive right to the thing patented is not secured if the public are at liberty to make substantial copies of it, varying its form or proportions. And, therefore, the patentee, having described his invention, and shown its principles, and claimed it in that form which most perfectly embodies it, is, in contemplation of law, deemed to claim every form in which his invention may be copied, unless he manifests an intention to disclaim some of those forms."

That a Claim to the invention in one form covers it in all forms, see *Grier v. Castle* (1883), 17 Fed. Rep. 523 ; 24 O. G. 1176 ; *McComb v. Brodie* (1872), 2 O. G. 117 ; 5 Fisher, 384 ; 1 Woods,

153. See also §§ 130, 237-244, and notes, *ante*.

That all qualities of the invention are covered by the Claim, though they are not specially stated, see *Ex parte Tweddle* (1876), 10 O. G. 747.

That a Claim for a device as an "attachment" to something else is a Claim for the device however used, see *McClain v. Ortmayer* (1888), 42 O. G. 724.

That additional Claims for different forms of the invention are unnecessary and improper, see *Ex parte McDougall* (1880), 18 O. G. 130 ; *Carver v. Braintree Mfg. Co.* (1843), 2 Story, 432 ; 2 Robb, 141.

That a Claim for a material having certain qualities does not cover subsequently discovered material having the same qualities, see *Goodyear v. Berry* (1868), 2 Bond, 189 ; 3 Fisher, 439 ; *Tetley v. Easton* (1852), Macrory's P. C. 48.

That a Claim for a chemical composition covers only the same use of the same or equivalent ingredients, see *Goodyear v. Berry* (1868), 2 Bond, 189 ; 3 Fisher, 439.

That the Claim of an invention in one form does not cover other forms when these are disclaimed, see *Union Paper Bag Mach. Co. v. Pultz & Walkley Co.* (1878), 15 O. G. 423 ; 15 Blatch. 160 ; 3 Bann. & A. 403 ; *Murphy v. Eastham* (1872), 5 Fisher, 306 ; 2 O. G. 61 ; Holmes, 113 ; *Winans v. Denmead* (1853), 15 How. 330.

That colorable variations may be covered by the Claim by using language sufficiently broad, see *Ex parte Demming* (1884), 26 O. G. 1207.

latter can be done.² Or where the invention consists in the new shape given to an object, such shape expressing an idea of means, all other shapes embodying the same idea are protected by the Claim for that alone.³ In this manner the protection of the patent, though not granted directly to the idea of means conceived by the inventor, as fully embraces it as if it were distinctly and expressly stated in the Claim.

§ 515. **The Claim must Correspond with the Description.**

Finally, as the Claim is the request of the inventor for the protection of the invention communicated to the public in the Description, it must entirely correspond with the Description and be based upon the matter therein contained.¹ No invention can be claimed in any specification unless it has

² That a Claim for the making of a thing or the doing of an act covers all modes of making or doing it, although only one mode is described, see *Union Paper Bag Mach. Co. v. Nixon* (1876), 1 Flippin, 491; 9 O. G. 691; 2 Bann. & A. 244.

³ That a Claim for a new shape of an object covers all other shapes expressing the same idea of means, see *Winans v. Denmead* (1853), 15 How. 330.

See also § 238 and notes, *ante*.

§ 515. ¹ That the invention claimed must be identical with the invention described, see *Knox v. Quicksilver Mining Co.* (1880), 4 Fed. Rep. 809; *Ex parte Designolle* (1877), 13 O. G. 227; *Ex parte Gould* (1876), 10 O. G. 203; *Ex parte Fairbanks* (1873), 3 O. G. 65; *Page v. Ferry* (1857), 1 Fisher, 298; *Corning v. Burden* (1853), 15 How. 252; *Seed v. Higgins* (1860), 8 E. & B. 755.

That the Claim and Description are distinct, and each must be complete and exact, and the Claim must be more than a mere reference to the Description, see *Ex parte Rice* (1874), 5 O. G. 522.

That the Claim is distinct from the Description, and represents such parts

of the described matter as constitute the invention to be patented, see *Merrill v. Yeomans* (1877), 94 U. S. 568; 11 O. G. 970.

That the Claim may be illustrated but not enlarged by the Description, see *Yale Lock Co. v. Greenleaf* (1886), 117 U. S. 555; 35 O. G. 386; *Railroad Co. v. Mellon* (1881), 104 U. S. 112; 20 O. G. 1891.

That the Claim can neither save a bad Description nor invalidate a good one, see *Kay v. Marshall* (1836), 2 Web. 39.

That a Claim cannot cover means substantially different from those described, though they produce substantially the same results, see *Ex parte Demming* (1884), 26 O. G. 1207.

That when the Description and Claim disagree, the Claim controls, see *McKesson v. Carndick* (1881), 21 O. G. 137; 19 Blatch. 158; 9 Fed. Rep. 44.

That when the Claim and Description are repugnant the whole invention must be found in one or the other, and the two may so contradict each other as to make the whole void, see *Smith v. Murray* (1886), 27 Fed. Rep. 69; 36 O. G. 1045.

been previously described in such a manner that any person skilled in the art could practise it from such Description, without experiment or the exercise of his own inventive skill.² Features of the invention not delineated in the Description cannot be inserted in the Claim, even though a mechanic in endeavoring to construct or employ the invention would inevitably discover them.³ Matter described as auxiliary, but not essential to the invention, cannot be stated in the Claim.⁴ A Claim for what has been described as a new part of an existing invention should not mention any other parts of such invention, unless they are necessarily connected with or related to the new, and when thus mentioned it must be apparent from the Claim itself that it does not attempt to cover them.⁵ A Claim for all modes of effecting a result when the invention has been previously described as a single mode of effecting it,⁶ or which embraces the natural

² That the invention claimed must have been so described that any one skilled in the art could practise it, see *Vogler v. Semple* (1877), 7 Bissell, 382; 11 O. G. 923; 2 Bann. & A. 556.

That a Claim based on an insufficient Description is void, see *Simpson v. Holliday* (1865), 12 L. T. Rep. N. S. 99.

³ That a Claim for a method not shown in the Description is void, see *Needham v. Washburn* (1874), 4 Clifford, 254; 7 O. G. 649; 1 Bann. & A. 537.

That a Claim for features not described, but which a maker of the article might discover by using it, is invalid, see *Kelleher v. Darling* (1878), 14 O. G. 673; 4 Clifford, 424; 3 Bann. & A. 438.

⁴ That the Claim must not contain matter described as auxiliary, see *Ex parte Wheat* (1879), 16 O. G. 360.

⁵ That where the described invention is a new part of an existing invention, the other parts should be omitted from the Claim if the new can be intelligibly stated without them, see *Ex*

parte Skinner (1881), 19 O. G. 662; *Ex parte Kitson* (1881), 20 O. G. 1750; *Ex parte Wilber* (1872), 1 O. G. 379; *Furbush v. Cook* (1857), 2 Fisher, 668.

⁶ In *O'Reilly v. Morse* (1853), 15 How. 62, Taney, C. J.: (112) "We perceive no well-founded objection to the description which is given of the whole invention and its separate parts, nor to his right to a patent for the first seven inventions set forth in the specification of his claims. The difficulty arises on the eighth. It is in the following words: 'Eighth, I do not propose to limit myself to the specific machinery or parts of machinery described in the foregoing specification and Claims; the essence of my invention being the use of the motive power of the electric or galvanic current, which I call 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 the first inventor or discoverer.' It is impossible to misunderstand the extent of this Claim. He claims the exclusive

force applied when the invention is a method of applying it, or which claims a principle of operation apart from the mechanism through which the operation is performed or the process in which it is employed, also violates this rule, since in each case the invention claimed is broader than the one described.⁷ The Claim may, however, be narrower than the invention set forth in the Description, provided the subject-matter of the Claim is a practically operative art or instrument.⁸ Thus, if

right to every improvement where the motive power is the electric or galvanic current, and the result is the marking or printing intelligible characters, signs, or letters at a distance. If this Claim can be maintained, it matters not by what process or machinery the result is accomplished. For aught that we now know, some future inventor, in the onward march of science, may discover a mode of writing or printing at a distance by means of the electric or galvanic current without using any part of the process or combination set forth in the plaintiff's specification. His invention may be less complicated, less liable to get out of order, less expensive in construction and in its operation. But yet if it is covered by this patent the inventor could not use it nor the public have the benefit of it without the permission of this patentee. Nor is this all; while he shuts the door against inventions of other persons, the patentee would be able to avail himself of new discoveries in the properties and powers of electro-magnetism which scientific men might bring to light. For he says he does not confine his claim to the machinery or parts of machinery which he specifies; but claims for himself a monopoly in its use, however developed, for the purpose of printing at a distance. New discoveries in physical science may enable him to combine it with new agents and new elements, and by that means attain the object in a manner superior to the present process

and altogether different from it. And if he can secure the exclusive use by his present patent he may vary it with every new discovery and development of the science, and need place no description of the new manner, process, or machinery, upon the records of the Patent Office. And when his patent expires the public must apply to him to learn what it is. In fine, he claims an exclusive right to use a manner and process which he has not described, and indeed had not invented, and therefore could not describe when he obtained his patent. The court is of opinion that the Claim is too broad, and not warranted by law."

That all modes of effecting an end cannot be claimed, see *Lawther v. Hamilton* (1884), 29 O. G. 449; 21 Fed. Rep. 811; *Ex parte Demming* (1884), 26 O. G. 1207; *Marsh v. Dodge & Stevenson Mfg. Co.* (1873), 5 O. G. 398; 6 Fisher, 562; *Stone v. Sprague* (1840), 1 Story, 270; 2 Robb, 10; *Wyeth v. Stone* (1840), 1 Story, 273; 2 Robb, 23.

⁷ That the Claim must not cover a force of nature, see *Detmold v. Reeves* (1851), 1 Fisher, 127.

That the Claim must not cover a principle, see *Ex parte Fairbanks* (1873), 3 O. G. 65; *Burr v. Duryee* (1863), 1 Wall. 531; *Walton v. Bateman* (1842), 1 Web. 613.

See §§ 133-143 and notes, *ante*.

⁸ That the invention claimed may be narrower than that described if it be

a single new element in the described invention be a complete operative means it may be claimed alone, and if it is essential to the operation of the invention as a whole, the entire invention may be indirectly protected by this restricted Claim.⁹ When the different parts of a device, as well as the device itself, have been described as new, the inventor may claim one part alone, or all parts separately, or the device alone, or both the parts and the device, as he deems best;¹⁰ and where he has described certain features of his invention as capable of being omitted without impairing its practical efficiency, these may be either inserted in the Claim or omitted from it without affecting its validity.

§ 516. The Claim: no Particular Form Required.

No particular form of words is required for the statement of the Claim.¹ The language used must be sufficiently clear and accurate to define the invention to the mind of the reader and convey to him a precise idea of its essential character,

an operative means, see *Ex parte* Emerson (1880), 17 O. G. 1451; *Russell & Erwin Mfg. Co. v. Mallory* (1872), 2 O. G. 495; 10 *Blatch.* 140; 5 *Fisher* 632.

⁹ That where a part of the described invention is practically operative alone, it may be claimed alone; and if essential to the operation of the rest, a Claim for it alone will protect the whole invention, see *Ex parte* Sturges (1872), 1 O. G. 204.

¹⁰ That where the Description shows several ways of applying a substance to new uses the Claim may cover all, see *Ex parte* Floyd (1874), 6 O. G. 541.

That where the parts of an invention are separately operative, a Claim for each may be inserted with that for the invention as a whole, see *Ex parte* Smith (1872), 2 O. G. 117.

That a Claim for each subordinate part is proper in connection with a Claim for the whole, though the parts are inoperative except in connection

with each other, see *Wells v. Jacques* (1874), 5 O. G. 364; 1 *Bann. & A.* 60.

See also § 472 and notes, *ante*.

That where the Description restricts the invention to a certain arrangement of parts, the Claim for the union of such parts must be correspondingly limited, see *Ex parte* Marsh (1872), 2 O. G. 197.

§ 516. ¹ That no particular form of Claim is required, see *Ex parte* Desig-nolle (1877), 13 O. G. 227; *Ex parte* Dahne (1875), 7 O. G. 1095; *Wyeth v. Stone* (1840), 1 *Story*, 273; 2 *Robb*, 23. ..

That the Claim is a whole and must stand or fall as such, being incapable of partial acceptance or rejection, see *Ex parte* Smith (1872), 1 O. G. 403.

That differences in the language of Claims do not necessarily show a difference in the inventions, see *Sharp v. Tiffit* (1880), 18 *Blatch.* 132; 17 O. G. 1282; 2 *Fed. Rep.* 697; 5 *Bann. & A.* 399.

neither exceeding the limits of the invention actually made, nor falling short of that operative means which the inventor intends to secure. A general and ambiguous Claim, leaving it uncertain what the inventor really wishes to protect, is void, but inartificial and ungrammatical expressions, not producing such uncertainty, do not render it invalid.² Useless words should not be inserted nor synonymous words be multiplied; since the former tend to create unnecessary ambiguity, while the latter are calculated to mislead the reader by suggesting to him that each word may be used by the inventor to express a different idea from that denoted by the others.³ Equivocal words are, of course, never permitted; for by their employment the meaning of the Claim is at once rendered doubtful.⁴

² That any terms properly qualified may be used in a Claim, see *Ex parte Holt* (1884), 29 O. G. 171.

That every element claimed must be clearly stated, not merely inferred, see *Ex parte Holt* (1884), 29 O. G. 171.

That a Claim must assert, not rest in doubtful implications, see *Fricke v. Hum* (1877), 22 Fed. Rep. 302.

That vague Claims are not allowable, see *Ex parte Paige* (1887), 40 O. G. 807.

That an ambiguous Claim is void, see *Edgerton v. Furst & Bradley Mfg. Co.* (1881), 9 Fed. Rep. 450; 21 O. G. 261; 10 Bissell, 402; *Merrill v. Yeomans* (1877), 94 U. S. 568; 11 O. G. 970; *Sargent v. Burge* (1877), 11 O. G. 1055; *Blake v. Stafford* (1868), 3 Fisher, 294; 6 Blatch. 195; *Rich v. Lippincott* (1853), 2 Fisher, 1.

That a Claim cannot use such indefinite expressions as "means," "mechanism," etc., see *Ex parte Holt* (1884), 29 O. G. 171; *Ex parte Wilkin* (1884), 29 O. G. 950; *Ex parte Demming* (1884), 26 O. G. 1207.

That a Claim must set out the invention, not merely refer to the Description, see *Ex parte Demming* (1884), 26 O. G. 1207.

That a Claim to what is described in the specification is too vague, see

Albany Steam Trap Co. v. Felthousen (1884), 22 Blatch. 169; 20 Fed. Rep. 633.

That where an invention consists in the peculiar arrangement of certain parts, a Claim stating the parts in a general manner and referring to the Description as showing the arrangement, is not sufficient, see *Ex parte Kerr* (1884), 28 O. G. 95.

That the casual misuse of words does not make a Claim defective, if it can be cured by examining the Description, see *Reed v. Street* (1885), 34 O. G. 339.

That a Claim will be sustained, though inaccurately expressed, if the court can see what the invention really is, see *Stover v. Halsted* (1875), 8 O. G. 558; 13 Blatch. 95; *Ames v. Howard* (1833), 1 Sumner, 482; 1 Robb, 689.

³ That the repetition of synonymous words is improper in a Claim, see *Ex parte Smith* (1872), 2 O. G. 117.

⁴ That equivocal words must not be used, see *Ex parte Designolle* (1877), 13 O. G. 227.

That the words "means," "mechanism," "connections," are proper when used to denote appliances which are not part of the invention, but are not to be used with reference to essential elements of the patentable subject-mat-

Of this character is the word "equivalent;" for as a true "equivalent," in the sense of the Patent Law, is always covered by the Claim, though not mentioned, the insertion of the word in the Claim implies matter outside its ordinary meaning and appears to widen the scope of the invention, while leaving its actual limits undefined.⁵

§ 517. The Claim: Technical Phrases.

In stating Claims certain phrases are frequently employed to which a special importance seems to be attached by applicants. Among these are the phrase "substantially as de-

ter, see *Ex parte* Stoughton (1888), 43 O. G. 1345; *Ex parte* Stanbridge (1888), 43 O. G. 1345.

⁵ In *Ex parte* Haasz (1873), 4 O. G. 610, Leggett, Com. : (611) "I know of no rule or reason for prescribing or proscribing the use of any particular word or phrase in connection with a specification or Claim. Anything of the sort would necessarily be arbitrary and unreasonable. All the words of our language are, of course, as free to the intelligent and appropriate use of inventors in their specifications and Claims as to anybody else; but there are some words and phrases which are capable of being used equivocally, and perhaps the words *equivalent* and *equivalents* are the most conspicuous examples. Whenever they occur in such a connection as to have an equivocal signification, their employment in that connection must be inhibited. This is as far as a rule of practice in the matter can go. Under this rule judicious care must be exercised in the consideration of each particular case, where these words recur, to the end that the Claims shall clearly, definitely, and correctly comprehend the alleged subject-matter of invention and nothing more. No ambiguous or useless word or phrase ought ever to be allowed in a Claim. It is well known to those versed in Patent Law, that equivalents are compre-

hended in every Claim, whether specified or not, and that the use of the word in a Claim cannot enlarge its legal scope. Wherever its use would merely serve to convey a magnified idea of the scope of the patent to the uninformed, it surely ought not to be allowed."

That a Claim covers all equivalents, see *Burden v. Corning* (1864), 2 Fisher, 477, and notes to § 257, *ante*.

That equivalents are covered though the inventor never thought of them, see *McNamara v. Hulse* (1842), 2 Web. 128.

That a Claim cannot cover matters subsequently discovered, see *Tetley v. Easton* (1852), Macrory's P. C. 48.

That equivalents should not be expressly claimed, see *Ex parte* Reid (1879), 15 O. G. 882; *Ex parte* Bogart (1876), 10 O. G. 113.

That the words "or equivalent devices." must not be used in a Claim unless the equivalents are described in the specification, or unless a patent for one would be a complete bar to a patent for the other, see *Ex parte* Dolph (1887), 39 O. G. 239.

That the examiner may require the words "or equivalents" to be erased, and the applicant cannot then amend by inserting a particular Claim for the alleged equivalent, see *Ex parte* Johnson (1888), 43 O. G. 507.

scribed," and others of the same meaning. These phrases import the same thing when used in a Claim as when elsewhere employed. They are neither necessary nor technical. The reference they make to the Description is always implied, and relates only to the essential features of the invention as therein delineated. They add nothing, therefore, to the certainty of the Claim, nor do they detract from it unless the claimant carelessly inserts them as a substitute for a more clear and definite statement of his invention.¹ When used, the word "described" refers to the Claim as well as the Description, and either may thus aid in the interpretation of the other.² Whether expressed or implied, they limit the general

§ 517. ¹ In *Mitchell v. Tilghman* (1873), 19 Wall. 287, Clifford, J.: (391) "Usually the Claim contains the words 'as described' or 'substantially as described,' or words of like import, which are everywhere understood as referring back to the descriptive parts of the specification. Words of such import, if not expressed in the Claim, must be implied, else the patent in many cases would be invalid as covering a mere function, principle, or result, which is obviously forbidden by the Patent Law, as it would close the door to all subsequent improvements." 5 O. G. 299 (303).

In *Ex parte Collins Co.* (1872), 2 O. G. 617, Leggett, Com.: (617) "These words should be regarded precisely as other words should be,—that is, as having their ordinary meaning,—when used in a Claim, as elsewhere, and nothing more. There is no artificial significance to be set up for them by which they are to be considered either as desirable or dangerous. There is no objection whatever to their use where they make sense; but they have no legal effect either to enlarge or limit a Claim properly drawn, and, so far as the grant of a patent is concerned, they should have no influence one way or the other. The Claim should be sufficient in its

terms either with or without them, because either with or without them its meaning and effect are to be determined in the courts by the light of the specification."

That Claims always refer to the Description, whether so expressed or not, see *Westinghouse v. Gardner & Ranson Air Brake Co.* (1875), 9 O. G. 538; 2 Bann. & A. 55.

That the phrase "substantially as described" has no efficacy unless the Description is clear, see *Ex parte Skinner* (1881), 19 O. G. 662.

That a Claim depending on the phrase "mechanism substantially as described" is too vague, see *Ex parte Wilkin* (1884), 29 O. G. 950.

That where the Description is specific the words "substantially as described," render the Claim specific, see *Ex parte Ewart* (1880), 17 O. G. 448.

That the phrase "substantially as described and shown" relates only to the material features of the invention, see *Waterbury Brass Co. v. Miller* (1871), 9 Blatch. 77; 5 Fisher, 48.

² That the word "described" refers to the Claim as well as the Description, see *Pearl v. Ocean Mills* (1877), 2 Bann. & A. 469; 11 O. G. 2.

terms of the Claim to the specific features set out in the Description, though neither these phrases, nor the one "as specified," confines the Claim to that mode of using the invention which has been previously described.³ The phrase "substantially as and for the purposes set forth" is of a different character. These are words of limitation, and should not be used unless they are intended to have their special signification. They refer to the Description for a qualification of the general statements of the Claim, and confine the invention within the purposes and operations there specifically named.⁴

§ 518. The Claim must not Claim a Mere Function.

One of the most objectionable forms in which a Claim can be stated is that of a Claim for the function of the invention. A functional Claim is one which claims the producing of an effect as distinguished from the means by which it is produced.¹ Such a Claim is void, since it neither covers a patentable invention nor corresponds with the Description previously given.² The language of a functional Claim is usually parti-

³ That a Claim for a combination "substantially as described" is limited to the elements described as composing it, see *Hailes v. Van Wormer* (1873), 20 Wall. 353; 5 O. G. 89.

⁴ That the phrase "in the manner . . . mentioned," limits the process to the manner described, see *Barker v. Grace* (1847), 1 Exch. 339.

That in a Claim the words "as specified" do not limit the Claim to the described mode of using the invention, see *Lorillard v. McDowell* (1877), 2 Bann. & A. 531; 11 O. G. 640; 13 Phila. 461; *Betts v. Menzies* (1861), 10 H. L. Cas. 117.

⁴ That the words "substantially as and for the purposes set forth" refer to the Description for a limitation of the general words employed, see *Corn Planter Patent* (1874), 23 Wall. 181; 6 O. G. 392; *Ex parte Sperry* (1872), 2 O. G. 387.

§ 518. ¹ In *Ex parte Hahn* (1875), 8 O. G. 597, Spear, Act. Com. : (597) "It is clear from the numerous decisions of the courts and Office on that point that what is known as a functional Claim is one that has for its subject the performance of an act merely, and not the means by which that act is executed. It is not for a substantive thing, but for the *result* which that thing accomplishes. Its language is usually in the participial form, as 'producing,' 'operating,' 'determining,' 'so combining,' 'so constructing,' etc."

² That a Claim for a function is void, see *Matthews v. Schoneberger* (1880), 4 Fed. Rep. 635; 18 Blatch. 357; 18 O. G. 1464; *Ex parte Ives* (1878), 15 O. G. 385; *Ex parte Arnold* (1874), 5 O. G. 553; *Wheeler v. Simpson* (1874), 1 Bann. & A. 420; 6 O. G. 435; *Sickels v. Falls Co.* (1861), 4 Blatch. 508; 2 Fisher, 202; Opin-

cial; and if construed according to its terms the matter claimed would be the operation of the invention on its object, not the invention itself. In order to sustain the patent the courts construe such Claims, if possible, as Claims for the means by which the act is performed, and not for the performance of the act itself.³ Thus a Claim for the "so forming" a thing is treated as a Claim for the thing formed; a Claim for the application of means by which a certain thing is done is held to be a Claim for the means applied; a Claim for producing a given effect, by means of a peculiar arrangement of the instruments employed, is considered as a Claim for the instruments as so arranged; and a Claim for the "doing" of an act is interpreted to be a Claim for the means or apparatus by which the act is done.⁴ But where the Claim is unequivocally functional, — as, for example, where it claims the "operating of" a machine, or the "imparting motion" to an object, — it is fatally defective.⁵ It must not be forgotten,

ion Atty. Gen. (1856), 8 Op. At. Gen. 269.

See also §§ 144-146 and notes, *ante*.

That participial Claims are improper, see *Ex parte Cox* (1873), 3 O. G. 2.

That an apparatus must not be claimed as a "means of doing," but as a specific device, see *Ex parte Bates* (1879), 16 O. G. 266.

That a Claim for a design must not cover a mere function, see *Ex parte Diffenderfer* (1872), 2 O. G. 57.

³ That a Claim, when functional in form, is treated, if possible, as a Claim for the means performing the function, see *Royer v. Schultz Belting Co.* (1886), 28 Fed. Rep. 850; 38 O. G. 898; *Coffin v. Ogden* (1869), 3 Fisher, 640; 7 Blatch. 61; *Minter v. Wells* (1834), 1 Web. 134; 2 Abb. P. C. 47.

That the courts do not sanction functional Claims by relieving patentees from their consequences, see *Ex parte Ives* (1878), 15 O. G. 385.

That functional Claims may often be cured by inserting a reference to the

mechanism described, see *Ex parte Holmes* (1874), 6 O. G. 360.

⁴ That a Claim for the "so forming," etc., is not functional, but claims the thing formed, see *Parham v. American Buttonhole, Overseaming, & Sewing Mach. Co.* (1871), 4 Fisher, 468.

That a Claim for the application of means by which an effect is accomplished is a Claim for the means applied, see *Hitchcock v. Tremaine* (1871), 4 Fisher, 508; 8 Blatch. 440.

That a Claim for such an arrangement of elements as will produce a certain effect is a Claim for the elements as so arranged, not for the function, see *Renwick v. Pond* (1872), 2 O. G. 392; 5 Fisher, 569; 10 Blatch. 39.

That a Claim for "doing" an act or thing is treated as a Claim for the means of doing it, see *Fuller v. Yentzer* (1876), 94 U. S. 288; 11 O. G. 551; *Seymour v. Osborne* (1869), 3 Fisher, 555.

⁵ That a Claim for the "operating of," etc., is void, see *Ex parte Ives* (1878), 15 O. G. 385.

That a Claim for "imparting mo-

however, that the function of one invention may be itself a different invention, as an art may stand in the relation of function to the apparatus by which it is performed. Where such an invention is the one described, it may be claimed in any language suitable for its definition, although the same Claim, if based on a Description of the instruments employed, would be clearly functional and void. In a Claim properly defining the real invention, its functions may be referred to and its operation set forth without impairing the validity of the Claim.⁹

§ 519. **The Claim must not Claim a Mere Effect.**

Another objectionable form of Claim is that which claims the result accomplished by the use of the invention, instead of the invention by whose use the result is attained. Where a result is a new product and constitutes the real invention, it is, of course, the proper subject of the Claim.¹ But where it is a mere effect of the means devised by the inventor, it cannot be claimed in his patent. It is not in its nature a patentable invention, nor, if it were, could it be monopolized by an inventor who had simply discovered one means of producing it.² Such Claims are, therefore, void, although, as in

tion," etc., is void, see *Sickels v. Falls Co.* (1861), 2 Fisher, 202; 4 Blatch. 508.

That in a machine patent a Claim for the "mode of operation" is void, see *Hatch v. Moffitt* (1883), 15 Fed. Rep. 252.

That a Claim for a mechanical process, which is a mere function of the described devices, is void, see *Case v. Hastings* (1875), 7 O. G. 557.

⁹ That a Claim for the means does not become a functional Claim by stating the operation of the means, if it is otherwise sufficient, see *Ex parte Gray* (1877), 11 O. G. 329; *Ex parte Kieth* (1876), 9 O. G. 744.

§ 519. ¹ That a Claim for a result as a product is valid, see *Anilin v. Higgin* (1878), 15 Blatch. 290; 14 O. G. 414; 3 Bann. & A. 462.

² That a Claim for a result as an effect is void, see *Ex parte Beavis* (1879), 16 O. G. 1233; *Marsh v. Dodge & Stevenson Mfg. Co.* (1874), 5 O. G. 398; 6 Fisher, 562; *Wheeler v. Simpson* (1874), 6 O. G. 435; 1 Bann. & A. 420; *Bailey Washing & Wringing Mach. Co. v. Lincoln* (1871), 4 Fisher, 379; *Sickels v. Falls Co.* (1861), 4 Blatch. 508; 2 Fisher, 202.

See also §§ 147-149 and notes, *ante*.

That a Claim for all means of accomplishing a result is a Claim for the result itself and therefore void, see *Lawther v. Hamilton* (1884), 29 O. G. 449; 21 Fed. Rep. 811; *Ex parte Demming* (1884), 26 O. G. 1207; *Marsh v. Dodge & Stevenson Mfg. Co.* (1874), 5 O. G. 398; 6 Fisher, 562; *O'Reilly v. Morse* (1853), 15 How. 62; *Stone v. Sprague* (1840), 1 Story, 270; 2 Robb, 10;

the case of functional Claims, the courts construe them, if possible, as Claims for the art or instrument by which the effect is accomplished.³ Thus a Claim for so forming an object that a certain result is attained, or for the production of an effect by arranging certain devices in the manner described, is regarded as a Claim for the object so formed, or the devices so arranged.⁴

§ 520. The Claim must not be Alternative.

A Claim stated in the alternative is invalid when the language of the Claim either covers nothing positively, or leaves it uncertain which of several things the inventor intends to claim.¹ The use of the disjunctive conjunction does not, of itself, render a Claim uncertain. Where the essential characteristics of the invention are properly set forth, and some of its connections or modes of use are described in the alternative, the Claim is good, since the matters described in the alternative form no part of the invention, and may be eliminated from the Claim without impairing the completeness of its statement of the real invention. Or where in setting forth the invention itself the disjunctive conjunction is employed in its enumerative sense, and the Claim thus becomes the equiva-

Wyeth v. Stone (1840), 1 Story, 273 ;
2 Robb, 23.

That a Claim for the use of a natural force for a special purpose is too broad, being equivalent to a Claim for the purpose thereby effected, see O'Reilly v. Morse (1853), 15 How. 62.

That where a structure produces results the Claim must be for the structure, not the result, see *Ex parte* Roloson (1879), 15 O. G. 471.

³ That where a Claim in terms is for a result it will be construed, if possible, to cover the means by which the result is effected, see Coes v. Collins Co. (1882), 22 O. G. 417 ; 20 Blatch. 221 ; 9 Fed. Rep. 905 ; Palmer v. Gatling Gun Co (1881), 19 Blatch. 392 ; 20 O. G. 815 ; 8 Fed. Rep. 513 ; Henderson v. Cleveland Co-operative Stove Co.

(1877), 12 O. G. 4 ; 2 Bann. & A. 604 ; Fuller v. Yentzer (1876), 94 U. S. 299 ; 11 O. G. 597 ; Corn Planter Patent (1874), 23 Wall. 181 ; 6 O. G. 392 ; Evarts v. Ford (1873), 5 O. G. 58 ; 6 Fisher, 587.

⁴ That a Claim for the "so forming . . . that" a given result is attained is a Claim for the means, not the result, see Lull v. Clark (1882), 22 O. G. 1535 ; 13 Fed. Rep. 456 ; 21 Blatch. 95.

§ 520. ¹ That alternative Claims are not allowable, see *Ex parte* Holt (1884), 29 O. G. 171 ; *Ex parte* McDougall (1880), 18 O. G. 130 ; *Ex parte* Reid (1879), 15 O. G. 882 ; Union Paper Bag Mach. Co. v. Nixon (1873), 4 O. G. 31 ; 6 Fisher, 402 ; Carr v. Rice (1858), 1 Fisher, 325.

lent for as many separate Claims as it contains enumerative clauses, the Claim, although irregular in form, is still allowable. Thus to claim both of two alternatives, or to claim different arrangements of the same elements in a combination where each arrangement is an operative means, has been permitted.² But the danger of ambiguity in all uses of the disjunctive, and the ease and security with which each of several devices or arrangements may be stated in separate Claims, causes alternative Claims to be disfavored by the Patent Office, although the courts may manifest a disposition to sustain them where the language is capable of an intelligible construction.

§ 521. The Claims must not be Unnecessarily Multiplied.

The law prescribes no limit to the number of Claims which may be inserted in a single specification. But a repetition of the same Claim, or the multiplication of Claims for the same invention, is not allowed except in cases where the nature of the invention renders it necessary to describe it in different methods, in order to make it clear or to state all that can rightfully be claimed. Claims are not like counts in a declaration, varied in terms to meet the possible phases of evidence or legal interpretation; they are conclusions from the specification, and must neither be fictitious, nor redundant, nor appear to cover more than fairly can be claimed.¹ The need-

² That a Claim to both of two alternatives is valid, see *Union Paper Bag Mach. Co. v. Nixon* (1873), 4 O. G. 31; 6 Fisher, 402.

That an alternative Claim is good only when it is the equivalent of two Claims, one for each alternative, see *Tuck v. Bramhill* (1868), 3 Fisher, 400; 6 Blatch. 95.

That a patent cannot claim alternative forms of a combination unless each is an operative machine, see *Brown v. Whittemore* (1872), 5 Fisher, 524; 2 O. G. 248.

That Claims cannot be for independent alternative constructions or for mere modifications of the construction

set up in other Claims, see *Ex parte Holt* (1884), 29 O. G. 171.

§ 521. ¹ In *Ex parte Woodruff* (1880), 17 O. G. 453, Doolittle, Act. Com. : (453) "The general doctrine heretofore in vogue in the Office that it is admissible, under proper restrictions, for parties to put their Claims in different forms to prevent misconstruction of them by the public or the courts must be construed, as the Examiner contends, to have reference, not to unnecessary repetition of Claims for the same thing, but to those cases which are difficult of definition, and where one set or form of words would be inadequate to clearly cover the invention

less repetition of the same matter in different Claims tends to mislead by conveying the idea that some substantial difference exists between the subjects of the several Claims; and if this is carried to such an extent as to create ambiguity, or cover more than is really invented, the entire patent may be rendered void.² Where one Claim will be sufficient no others should be made; and where two or more are inserted, without necessity, the one which best protects the invention will be retained and the others will be rejected.³ But several

and prevent misconstruction. Another difficulty arises from the inability of an applicant to set forth in a single Claim the device broadly, so that it will cover all other devices which are the same in principle of operation, and therefore equivalents, and, at the same time, the specific device he has invented and described to carry out the improvement in the art of manufacture. But where the invention is simple in nature and can be clearly stated in simple language and in one Claim, there is no justification for setting out the invention in a series of Claims which all mean the same thing. Claims are not like counts in pleadings, which are often repetitions of the same cause of action in different forms of language to provide against the hazard of the proofs varying materially from the statement of the cause of action, but they are the conclusion of the specification, and their object is to set forth distinctly and concisely just what the invention is which the applicant asks to be secured to him by his patent, and they should not consist of fictitious, redundant, or amplified allegations of matters by which it is hoped to secure protection for something more than the applicant has actually invented or contemplated. Where the terms of a Claim in a patent are clear and distinct, as they always should be, no necessity arises for repeating such Claim in different forms of language, and subjecting the Office and the courts

to great labor in scrutinizing them, and to doubt and annoyance as to their limitations and construction."

That the duplication of Claims does not necessarily avoid a patent, see *Tompkins v. Gage* (1865), 5 Blatch. 268; 2 Fisher, 577.

That divided and multiplied Claims are disapproved, see *Bostock v. Goodrich* (1884), 21 Fed. Rep. 316; 29 O. G. 278.

That Claims for the same thing may be repeated in different language in order to prevent misunderstanding, see *Ex parte Hahn* (1875), 8 O. G. 597; *Ex parte Shippen* (1875), 8 O. G. 727.

² In *Carlton v. Bokee* (1873), 17 Wall. 463, Bradley, J. : (471) "We think it proper to reiterate our disapprobation of these ingenious attempts to expand a simple invention of a distinct device into an all-embracing Claim, calculated by its wide generalizations and ambiguous language to discourage further invention in the same department of industry and to cover antecedent inventions. Without deciding that a repetition of substantially the same Claim in different words will vitiate a patent, we hold that where a specification by ambiguity and a needless multiplication of nebulous Claims is calculated to deceive and mislead the public, the patent is void." 2 O. G. 520 (523); 6 Fisher, 40 (48).

³ That two Claims for the same thing are improper, and that which

Claims for the same art or instrument as serving different purposes, or as employed in different modes, or as accomplishing different results, may be properly made, since such a separation tends to prevent confusion and to preserve the essential characteristics of the invention distinct from those of its objects and its uses.⁴

§ 522. **The Claim: Joinder of Claims for Different Inventions.**

The joinder of several Claims for different inventions in the same specification is governed by the rules heretofore considered in reference to the joinder of inventions.¹ The Claims, being the life of the patent, the central point to which all the other parts converge and from which they derive their value to the inventor, may embrace every invention for whose protection he may lawfully apply; and must embrace all those which his patent is destined to secure. A Claim may, therefore, be inserted in the specification for each of the described inventions whose nature and dependence on the principal invention is such as to permit its joinder in the same application. The Claims for each of these inventions must possess all the characteristics, and fulfil all the requirements which would be necessary to their validity were it the sole invention claimed.

§ 523. **The Claim Interpreted by other Parts of the Application.**

While the rules governing the scope and language of the Claim are thus numerous and rigid, the attitude of the courts toward the inventor, in its interpretation, is just and liberal.

best protects the invention will be retained, the other rejected, see *Dederick v. Cassell* (1881), 20 O. G. 1233; 9 Fed. Rep. 306; 14 Phila. 503.

That a Claim embracing only a feature or quality which is covered by another Claim, as inseparable from its particular subject-matter, is void, see *Combined Patents Can Co. v. Lloyd* (1882), 15 Phila. 485; 11 Fed. Rep. 153.

That a Claim cannot be so changed by construction as to make it the same as another Claim of the same patent, see *Filley v. Littlefield Stove Co.* (1887), 39 O. G. 1203; 30 Fed. Rep. 434.

⁴ That several Claims for the same device as accomplishing several results may be inserted, see *Ex parte Smith* (1880), 17 O. G. 271.

§ 522. ¹ That Claims for separate but dependent inventions may be joined, see *Ex parte Smith* (1872), 2 O. G. 117.

That a second Claim for an inseparable feature of the invention previously claimed is not proper, see *Combined Patents Can Co. v. Lloyd* (1882), 11 Fed. Rep. 153; 15 Phila. 485.

See also §§ 468-479 and notes, *ante*.

In construing the Claim the whole specification is taken together, and if the terms in which the Claim is stated are consistent with those of the Description, the latter with its accompanying drawings is treated as an amplification and explanation of the former, illustrating and applying its more concise and definite expressions. Thus, though the Claim is distinct from the Description and as such must be complete in itself and not merely refer to the Description for a statement of the invention claimed, yet every feature of the invention which the Description has declared to be essential, and all the modes of using it therein prescribed, are covered by the Claim, whether or not they are particularly mentioned.¹ Without departing from the rule that the Claim must clearly limit and define the exact invention for which a patent is desired, or assuming the power to alter or enlarge a Claim, the courts sustain it whenever in connection with its proper exponent, the Description, and in view of the state of the art, it renders the nature of the claimed invention evident to those to whom the specification is addressed.²

§ 523. ¹ That the Claims are interpreted and limited by the Description, see *Snow v. Lake Shore & Mich. Southern R. R. Co.* (1887), 121 U. S. 617; 39 O. G. 1081; *Ex parte Holt* (1884), 29 O. G. 171; *Fuller v. Yentzer* (1874), 6 Bissell, 203; *Ex parte Marsh* (1872), 2 O. G. 197.

That parts shown in the Description to be essential to the invention must be understood, though not mentioned in the Claim, see *Ex parte Richardson* (1875), 7 O. G. 1053.

That a Claim may be limited by the drawings, where it describes the device only by letters referring to them, see *Ex parte Marsh* (1872), 2 O. G. 197.

That drawings cannot so far supply the place of a written Description that a Claim can be construed to cover matter shown only in the drawings, see *Gunn v. Savage* (1887), 30 Fed. Rep. 366.

That the Claim cannot be enlarged by the Description, see *Yale Lock Co.*

v. Greenleaf (1886), 117 U. S. 554; 35 O. G. 386; *Lehigh Valley R. R. Co. v. Mellon* (1881), 104 U. S. 112; 20 O. G. 1891.

That where the Description and Claims disagree, the Claims control, see *McKesson v. Carndick* (1881), 21 O. G. 137; 19 Blatch. 158; 9 Fed. Rep. 44.

² That whenever the nature of the invention can be ascertained by construing the specification in view of the state of the art, the Claim will be construed to cover it, if its language will permit, see *Andrews v. Carman* (1876), 9 O. G. 1011; 13 Blatch. 307; 2 Bann. & A. 277; *Turrill v. R. R. Co.* (1863), 1 Wall. 491; *Whipple v. Middlesex Co.* (1859), 4 Fisher, 41; *Le Roy v. Tatham* (1852), 14 How. 156; *Haworth v. Harcastle* (1854), 1 Web. 480; 2 Abb. P. C. 19.

That a Claim for a device which is useless in itself, but is useful in connection with other things mentioned in

§ 524. The Claim for a Combination: Combinations not Covered by Claims for their Elements.

By the application of these general rules to Claims for different classes of inventions many special rules have been developed, to which from time to time new rules are added as new cases are presented for determination. In examining these attention must be first directed to the rules concerning combinations. A combination is the union of several elements under one co-operative law. It is an invention distinct both from the elements of which it is composed and from the law by which their co-operation is controlled. It must, therefore, be claimed as an invention by itself, not being covered by a Claim for each of the elements separately, nor by a Claim for all of them collectively, nor by a Claim for all of them co-operatively under a different co-operative law.¹

§ 525. The Claim for a Combination: its General Requisites.

A Claim for a combination must include all its essential characteristics, and embrace enough to produce a distinct and useful result, but must, at the same time, be confined to that union of one element with another which the inventor has created and described.¹ It must distinguish clearly between

the Description, is good, see *Wells v. Jacques* (1874), 1 Bann. & A. 60; 5 O. G. 364.

That where the specification describes several ways of applying a substance to new uses, the Claim will be so construed as to cover all, see *Ex parte Floyd* (1874), 6 O. G. 541.

§ 524. ¹ That a Claim for the elements alone does not cover the combination, see *Delaware Coal & Ice Co. v. Packer* (1880), 5 Bann. & A. 296; 1 Fed. Rep. 851; 24 O. G. 1273. See also § 527 and notes, *post*.

§ 525. ¹ That a Claim including an element not co-acting as part of the combination is invalid, see *Van Camp v. Maryland Pavement Co.* (1888), 43 O. G. 884; *Kerosene Lamp Heater Co. v.*

Littell (1878), 13 O. G. 1009; 3 Bann. & A. 312.

That a patent for a combination of old elements cannot claim any other union of the elements than the one invented and described, see *Larabee v. Cortlan* (1851), 3 Fisher, 5; Taney, 180.

That a patent cannot claim alternative combinations unless both are operative means, see *Brown v. Whittemore* (1872), 5 Fisher, 524; 2 O. G. 248.

That where a Claim for a combination attributes to it a certain motion, it is the means by which the motion is produced and not the motion that forms the subject of the patent, see *Royer v. Schultz Belting Co.* (1886), 28 Fed. Rep. 850; 38 O. G. 898.

the new and the old, either by expressly disclaiming the latter or by totally omitting it;² and if the real invention consists only in the new arrangement of an existing combination, improving its operation or effect, the Claim must point out the new arrangement as the limit of its request for protection, or the Claim will be too broad.³ Features not essential to the combination should not be introduced into the Claim.⁴ If the new combination forms merely a part of some art or instrument of wider scope, the other portions of the art or instrument should not be mentioned, where the new combination can be adequately set forth without them; and when their statement becomes necessary they should be disclaimed. Nor should the Claim embrace the connecting mechanism by which the new combination is united to the principal invention, except under the same necessity and coupled with a similar disclaimer.⁵

² In *The Corn Planter Patent* (1874), 23 Wall. 181, Bradley, J. : (224) "Where a patentee, after describing a machine, claims as his invention a certain combination of elements, or a certain device, or part of the machine, this is an implied declaration, as conclusive, so far as that patent is concerned, as if it were expressed, that the specific combination or thing claimed is the only part which the patentee regards as new. True, he or some other person may have a distinct patent for the portions not covered by this; but that will speak for itself. So far as the patent in question is concerned, the remaining parts are old, or common and public." 6 O. G. 392 (400).

That all unclaimed elements of the described combination are thereby conceded to be old, see *Rowell v. Lindsay* (1881), 10 Bissell, 217; 19 O. G. 1565; 6 Fed. Rep. 290; *Conover v. Roach* (1857), 4 Fisher, 12; *Batten v. Taggart* (1851), 2 Wall. Jr. 101. This concession relates only to the patent in question; the unclaimed matter in itself may really be new and reserved for a future patent. See § 506 and notes, *ante*.

³ That where the Claim covers a combination which in its general character is old, the special construction in which the novelty consists must be pointed out or it will be too broad, see *Terry Clock Co. v. New Haven Clock Co.* (1878), 17 O. G. 908; 3 Bann. & A. 332.

⁴ That a Claim for a combination should not cover non-essential elements, see *Rapid Service Store R. R. Co. v. Taylor* (1887), 42 O. G. 721; *Royer v. Schultz Belting Co.* (1886), 28 Fed. Rep. 850; 38 O. G. 898; *Hancock Inspirator Co. v. Jenks* (1884), 21 Fed. Rep. 911; *Ex parte Kitson* (1881), 20 O. G. 1750; *Furbush v. Cook* (1857), 2 Fisher, 668.

That an unessential part is not an element unless claimed as such, see *Bradley v. Dull* (1884), 27 O. G. 625; 19 Fed. Rep. 913. See also § 278 and notes, *ante*.

⁵ That a Claim for a combination should not include the connecting mechanism unless it is an element in the combination or is essential to the comprehension of what is claimed, see *Ex parte Skinner* (1881), 19 O. G. 662.

§ 526. The Claim for a Combination may be Stated in any Intelligible Form.

Any form of words may be employed in a Claim for a combination provided it accurately describes the real invention. To enumerate the elements, and to state explicitly the method of their combination and the law of their co-operation, constitutes a perfect Claim; but such a statement is not always possible. The inventor is not obliged to understand, sufficiently to formulate in words, the mode in which these elements unite and act upon each other or upon their common object. It is enough that he has actually combined them and thereby produced a new and useful operative means; and any language in which he can make his invention so far intelligible to the public that they can practise it themselves, and can perceive the limits of the exclusive privilege he claims, answers the requirements of the law.¹ Thus a Claim for the described elements in such a combination as will achieve a certain result, or a Claim for such an arrangement of the elements as will produce a given effect, or a Claim for so much of the mechanism described as accomplishes a particular purpose,—have been allowed, where the Description indicated to those skilled in the art such combinations, arrangements, or portions of the mechanism as gave clearness and precision to the Claim.² No such Claim can be con-

§ 526. ¹ That a Claim for a combination must embrace enough to produce a distinct, definable, and unitary result, though not necessarily enough to produce the entire result aimed at, see *Ex parte Rheutan* (1874), 5 O. G. 521; *Ex parte Farrow* (1872), 2 O. G. 57.

That a Claim for an inoperative combination is void, see *Tarrant v. Duluth Lumber Co.* (1887), 39 O. G. 1425; 30 Fed. Rep. 830.

² In *Renwick v. Pond* (1872), 10 Blatch. 39, Blatchford, J.: (49) "Claiming the arrangement of a combination, when the arrangement is such as to produce a given mechanical result of the combination, is not a Claim to a function. The result is not claimed ir-

respective of the means producing it. The means alone are claimed, and claimed only when specially arranged to produce a given result. This is very far from claiming a function." 2 O. G. 392 (395); 5 Fisher, 569 (579).

In *Silsby v. Foote* (1852), 14 How. 218, Curtis, J.: (226) "When a Claim does not point out and designate the particular elements which compose a combination, but only declares, as it properly may, that the combination is made up of so much of the described machinery as effects a particular result, it is a question of fact which of the described parts are essential to produce that result; and to this extent, not the construction of the Claim, strictly speak-

strued to extend beyond the matter previously described. Whether it contains the phrase "substantially as described" or not, it must be limited to the elements and mode of union already set forth at length in the Description.³

§ 527. **The Claim for a Combination Covers only the Precise Combination Claimed.**

A Claim for a combination covers the exact combination claimed and nothing more. It does not protect the elements of the combination, nor their mode of union, nor their co-operative law, separately considered.¹ It does not embrace any other union of the same elements with each other, or with additional elements, nor a combination of a portion of these elements among themselves.² Where it omits certain

ing, but the application of the Claim should be left to the jury."

That the Claim may state that the combination consists of the described elements when so constructed as to produce the given effect, see *Gottfried v. Phillip Best Brewing Co.* (1879), 17 O. G. 675; 5 Bann. & A. 4.

That a Claim for the combination as a whole may be stated as covering the described elements in combination, see *Wicke v. Ostrum* (1881), 103 U. S. 461; 19 O. G. 867.

That "means," "mechanism," and similar comprehensive terms are not proper in Claims for combinations for the purpose of pointing out the invention, see *Ex parte Paige* (1887), 40 O. G. 807; *Ex parte Wilkin* (1884), 29 O. G. 950; *Ex parte Holt* (1884), 29 O. G. 171; *Ex parte Kerr* (1884), 28 O. G. 95; *Ex parte Demming* (1884), 26 O. G. 1207.

³ That a Claim for a combination "substantially as described" will be limited to the elements described as composing it, see *Hailes v. Van Wormer* (1873), 20 Wall. 353; 5 O. G. 89.

That the words "or other part" in a Claim for a combination of elements means other equivalent part and is

sufficiently certain, see *Babcock & Wilcox Co. v. Pioneer Iron Works* (1888), 43 O. G. 756.

§ 527. ¹ That a Claim for a combination does not cover its elements, see *Evans v. Kelly* (1880), 13 Fed. Rep. 903; 23 O. G. 192; 9 Bissell, 251; 5 Bann. & A. 71; *Mowry v. Whitney* (1871), 14 Wall. 620; 5 Fisher, 494; 1 O. G. 492; *Lister v. Leather* (1858), 8 E. & B. 1031.

² That a Claim for a combination of old elements does not cover any combination in which one element is new and essentially different, see *Babcock v. Judd* (1880), 17 O. G. 1351; 1 Fed. Rep. 408; 5 Bann. & A. 127.

That a Claim for such a combination of the described elements as will produce a given result covers only the combination actually stated in the Description, see *Case v. Brown* (1864), 2 Wall. 320.

That a patent for a combination of old elements cannot claim any union of one element with another except the union invented and described, see *Larabee v. Cortlan* (1851), 3 Fisher, 5; Taney, 180.

That the Claim must be limited to the arrangement described in the Claim,

elements it excludes them from the combination, though they are in fact essential to it as an operative means; and where it treats certain elements as necessary they cannot afterwards be declared by the inventor to be unnecessary, although his real invention was complete without them.³

§ 528. The Claim for a Combination may be Joined with Claims for its Elements and Sub-combinations.

The specification of a combination may contain several different Claims. Besides the Claim for the combination as a whole, each of its elements and sub-combinations, if new and patentable inventions, may be also claimed, even where they are useless except as portions of the principal invention.¹ But Claims for the same element or sub-combination, as performing functions not relating to the combination as a whole, and Claims for different combinations though composed of the same elements, cannot be inserted, unless they come within the general rules concerning the joinder of inventions.²

see *Tate v. Thomas* (1885), 30 O. G. 345; *Ex parte Marsh* (1872), 2 O. G. 107.

³ That elements omitted from the Claim are thereby excluded from the combination, see § 156, note 2, and §§ 278, 282 and notes, *ante*.

That when devices are described as useful only in combination with other devices a Claim for the former as a combination includes the latter also, see *Ex parte West* (1872), 2 O. G. 30.

That a Claim including non-essential elements makes them essential, and the patentee cannot afterwards assert that they are unnecessary, see *Van Camp v. Maryland Pavement Co.* (1888), 43 O. G. 884; *Royer v. Schultz Belting Co.* (1886), 28 Fed. Rep. 850; 38 O. G. 898; *Fay v. Cordesman* (1883), 109 U. S. 408; 25 O. G. 1277; *Le Fever v. Remington* (1882), 22 O. G. 1537; 13 Fed. Rep. 86; 21 Blatch. 80; *Coolidge v. McCone* (1874), 2 Sawyer, 571; 5 O. G. 458.

That a Claim for a combination makes essential all parts which are named as, or must be necessarily inferred to be, elements, but not parts used as connecting or moving factors alone, see *Thompson v. Gildersleeve* (1888), 43 O. G. 886.

§ 528. ¹ That the elements, if new, may be separately claimed, see *Stevens v. Pritchard* (1876), 2 Bann. & A. 390; 4 Clifford, 417; 10 O. G. 505. See also § 472 and notes, *ante*.

That the elements may be claimed, though useless out of the combination, see *Henderson v. Cleveland Co-operative Stove Co.* (1877), 12 O. G. 4; 2 Bann. & A. 604.

² That different combinations of the same elements cannot be covered by one patent, see *Ex parte Shepard* (1872), 3 O. G. 522.

That different combinations of the same elements as performing different functions, cannot be claimed in one patent, see *Pattee v. Moline Plow Co.*

§ 529. **The Claim for an Art: its General Requisites.**

A Claim for an art should enumerate the acts in which its essential character resides, and set them forth in such a manner as to identify them with the acts delineated in the Description. The mode of doing this is left to the discretion of the inventor, and to the peculiar nature of the process he attempts to claim. But in claiming this class of inventions there is especial danger of a departure from the terms of the Description. A Description relating to the production of an effect by the use of mechanism should conclude with a Claim for the machine only, not for the art of using it, unless its use for the purpose named is a distinct invention and has been so described.¹ On the other hand, a Description setting forth a new process, and referring to the apparatus employed in practising it merely as illustrating and explaining the new art, should be followed by a Claim for the art only, not for the apparatus so employed.² Where an effect is produced by new chemical forces, or by the new application of some natural force, the effect though new is not the proper subject of a Claim; the use of the new forces and the new use of the natural force are arts and must be so claimed.³ A Claim for

(1881), 22 O. G. 173 ; 9 Fed. Rep. 821; 10 Bissell, 377.

That each Claim must cover a complete and operative combination in the general direction of the invention, see *Ex parte* Holt (1884), 29 O. G. 171.

§ 529. ¹ That a Claim for a mechanical process, which is a mere function of the described machine, is not proper, see *Ex parte* Simonds (1888), 44 O. G. 445 ; *Case v. Hastings* (1875), 7 O. G. 557 ; *Piper v. Brown* (1870), 4 Fisher, 175 ; *Holmes*, 20.

That a Claim for a combination of mechanical elements cannot be construed to cover a process, but must be limited to the mechanical parts and equivalents, see *Grier v. Wilt* (1887), 120 U. S. 412 ; 38 O. G. 1365.

That when the functions of a machine constitute a new process, the process may be claimed though no other

machines will perform it, see *Ex parte* Wintherlich (1879), 17 O. G. 55. See also § 172 and notes, *ante*.

That a Claim for a process, consisting in the operation of a machine, is only a Claim for the machine, see *Dederick v. Cassell* (1881), 20 O. G. 1233 ; 9 Fed. Rep. 306 ; 14 Phila. 503.

See also §§ 466, 473, 474, and notes, *ante*.

² That where a new process is described but the Claim is limited to the apparatus which performs it, the patent is void unless the apparatus is also new and patentable, see *Boston Elastic Fabrics Co. v. East Hampton Rubber Thread Co.* (1874), 5 O. G. 696 ; *Holmes*, 372 ; 1 Bann. & A. 222.

³ That where the effect is obtained by the new use of natural forces, the new use should be claimed as an art, see *Piper v. Brown* (1870), 4 Fisher,

an art covers all ways of practising it, and if its elements possess equivalents, a general Claim may cover it under every form; and a specific Claim, following the particular method of performing it laid down in the Description, will cover it under the method thus described.⁴ But the Claim for a process does not embrace the product, although no other mode of producing it is yet discovered; nor does a Claim for several arts in combination protect these arts except as thus co-operating to a common end.⁵ A Claim for each step of an art may be joined with the Claim for the art itself whenever such steps are true sub-processes and are complete inventions in themselves, but not where they are incapable of use as operative means when severed from each other.⁶

§ 530. The Claim for a Machine: its General Requisites.

A machine must be claimed as a specific piece of mechanism, not as a mode of operation, a principle, an idea, a means of producing an effect, or an effect produced.¹ If the inven-

175; Holmes, 20; O'Reilly v. Morse (1853), 15 How. 62.

That where an effect is produced by chemical action the Claim should be for a process, see Piper v. Brown (1870), 4 Fisher, 175; Holmes, 20.

That a Claim for the "process of constructing" by doing certain acts is a Claim for a process, see Andrews v. Cross (1881), 8 Fed. Rep. 269; 19 Blatch. 294; 19 O. G. 1705.

⁴ That a general Claim for a process covers all ways of performing it, see Tilghman v. Proctor (1880), 102 U. S. 707; 19 O. G. 859; Bridge v. Brown (1871), Holmes, 53.

That a Claim for a process to whatever substance, known or unknown, it may be applied is too broad, see Bailey Washing & Wringing Mach. Co. v. Lincoln (1871), 4 Fisher, 379.

⁵ That a Claim for the process does not necessarily cover the product, see Goodyear v. Wait (1867), 5 Blatch. 468; 3 Fisher, 242.

That a Claim for a process does not

protect the product if the product can be made in any other way, see Goodyear v. Railroad (1853), 1 Fisher, 626; 2 Wall. Jr. 356.

That the product and process cannot be expressly embraced in one Claim, see *Ex parte* Bates (1879), 16 O. G. 266; Merrill v. Yeomans (1874), 1 Bann. & A. 47; 5 O. G. 267; Holmes, 331.

⁶ That each stage of a process, if a true sub-process, may be also covered by a separate Claim, see *Ex parte* Wilson (1879), 16 O. G. 95; *Ex parte* Smith (1879), 16 O. G. 630.

That different steps of an entirety process cannot be covered by separate Claims, see *Ex parte* Wheat (1879), 16 O. G. 360.

That a Claim for a process does not cover either the separate steps or the materials used unless they are clearly pointed out and described in the specification, see Western Electric Co. v. Ansonia Co. (1885), 114 U. S. 447; 31 O. G. 1305.

§ 530. ¹That a machine must be

tion does not embrace an entire machine, the parts invented must be clearly pointed out and claimed, and the parts not invented must not be mentioned, or if mentioned must be disclaimed.² The function of the machine must not be claimed, nor its mode of operation; though if this function constitutes a new process it is patentable as an art, and a Claim for it may be joined with those for the machine unless the general rules regarding the joinder of inventions would be thereby infringed.³ Claims for each subordinate piece of mechanism may be joined with those for the principal machine, though not capable of use in any other known connection.⁴

§ 531. The Claim for a Manufacture: its General Requisites.

A manufacture must be claimed as a new product, apart from any Claim for the process of making it or for the pur-

claimed as such, and not as a principle, a mode of operation, or an idea, see *Burr v. Duryee* (1863), 1 Wall. 531.

That an apparatus should not be claimed as a "means of doing," but as a distinct instrument, see *Ex parte Bates* (1879), 16 O. G. 266.

² That if the invention does not embrace an entire machine, the parts invented must be distinctly claimed, see *Seymour v. Osborne* (1870), 11 Wall. 516.

That the new parts must be distinctly claimed, and if claimed only in connection with other parts they are protected only in such connection, see *Graham v. Mason* (1869), 5 Fisher, 1; 4 Clifford, 88.

That a Claim for a device having certain capabilities covers only the instrumentalities by which the effect is produced, see *Anders v. Gilliland* (1880), 19 O. G. 177.

³ That in a machine patent a Claim for the "mode of operation" is void, see *Hatch v. Moffitt* (1883), 15 Fed. Rep. 252.

That when an effect, not in itself a new invention, is produced by the

operation of a machine, the Claim must be for the machine, not the process, see *Dederick v. Cassell* (1881), 20 O. G. 1233; 9 Fed. Rep. 306; 14 Phila. 503; *Piper v. Brown* (1870), 4 Fisher, 175; Holmes, 20.

That where the Description covers a process and the Claim covers only a machine, unless the machine is new the patent is void, see *Boston Elastic Fabrics Co. v. East Hampton Rubber Thread Co.* (1874), 5 O. G. 696; Holmes, 372; 1 Bann. & A. 222.

That when the functions of a machine are a new process the latter may be claimed as a process, though no other machine will perform it, see *Ex parte Wintherlich* (1879), 17 O. G. 55. See also §§ 473, 474, and notes, *ante*.

⁴ That several Claims for the same device, as accomplishing several results, may be made in the same patent, see *Ex parte Smith* (1880), 17 O. G. 271.

That each subordinate mechanism may be separately claimed, though not useful by itself, see *Wells v. Jacques* (1874), 5 O. G. 364; 1 Bann. & A. 60.

pose for which it is employed.¹ If the product is new in itself, it should be set forth in the Claim by a simple enumeration of its essential qualities, without reference to the mode in which it is produced; but where such a statement is impossible it may be defined as the product resulting from a described process, or in any other sufficient manner.² When the character of the product depends upon its method of production, it must be claimed only as produced by that specific process, and the same form of Claim must be employed when the process and the product are inseparable.³ The words "article of manufacture" have no particular significance in a Claim, and do not aid nor impair its validity.⁴ The name of the product claimed refers to it as it is delineated in the Description, not as it is in itself or may become known in the arts.⁵ A Claim for a new product resulting from the use of substances having certain described qualities does not cover a product resulting from the use of subsequently discovered substances having the

§ 531. ¹ That a new product may be claimed by itself, see *Glue Co. v. Upton* (1874), 4 Clifford, 237; 6 O. G. 837; 1 Bann. & A. 497.

That the manufacture must be claimed independently of the process, see *Ex parte Mayall* (1873), 4 O. G. 210.

That a Claim for the manufacture should not explain nor set forth the process by which it is made, see *Ex parte Shalters* (1879), 15 O. G. 970; *Ex parte Cobb* (1874), 5 O. G. 751; *Ex parte Mayall* (1873), 4 O. G. 210.

² That a product may be claimed by enumerating its qualities, and setting forth the mode of its production, in the Description and referring to these in the Claim, see *Ex parte Tweddle* (1876), 10 O. G. 747.

That a product may be claimed by describing it, and the mode of making it, and stating it to be new, see *United Nickel Co. v. Pendleton* (1883), 15 Fed. Rep. 739; 24 O. G. 704; 21 Blatch. 226.

³ That where product and process

are inseparable the product may be claimed as the result of employing the process, see *Glue Co. v. Upton* (1874), 4 Clifford, 237; 6 O. G. 837; 1 Bann. & A. 497.

That the Claim may be for the product however made, or as the result of a given process, see *Merrill v. Yeomans* (1874), 1 Bann. & A. 47; *Holmes*, 331; 5 O. G. 267.

That a Claim for a product as produced by any process which will produce a like result covers it only when made by equivalent processes, see *Pickhardt v. Packard* (1884), 22 Fed. Rep. 530; 23 Blatch. 23; 30 O. G. 179.

⁴ That the phrase "article of manufacture" has no special significance in a Claim, see *Ex parte Adams* (1873), 3 O. G. 150; *Ex parte Wattles* (1873), 3 O. G. 291.

⁵ That the name of the product claimed refers to it as described, not as it actually exists, see *Anilin v. Cummins* (1879), 4 Bann. & A. 489; *Anilin v. Hamilton Mfg. Co.* (1878), 3 Bann. & A. 235; 13 O. G. 273.

same qualities;⁶ nor is any product so embraced in the process which produces it that a Claim for the process will protect the product when produced in any other manner.⁷ Claims for a new manufacture and the means of making it, whether the means be an art or a machine, may be joined subject to the limitations of the general rules already stated.⁸

§ 532. **The Claim for a Composition of Matter: its General Requisites.**

A single composition of matter requires only a single Claim, in which the invention is set forth, like any other combination, by enumerating its elements, and stating the mode of their union, and the essential qualities of the resulting composition.¹ If such a Claim cannot be framed, whatever defines and distinguishes the composition from all others will suffice, — as where it describes the compound as the result of mixing certain ingredients in a certain manner. A Claim for a composition formed of specific known ingredients should mention each of them, and if it states no definite proportions, or mode of intermixture, those named in the Description are presumed to be referred to in the Claim.² A Claim for a chemical composition covers only the same use of the same or equivalent chemical ingredients.³ A Claim for any union of less than the whole group of ingredients employed in the production of

⁶ That a Claim for a product formed of certain described substances having certain qualities does not cover products formed of subsequently discovered substances having the same qualities, see *Goodyear v. Berry* (1868), 2 Bond, 189; 3 Fisher, 439.

⁷ That a Claim for the process does not cover the product, if it can be made in any other manner, see *Goodyear v. Wait* (1867), 5 Blatch. 468; 3 Fisher, 242; *Goodyear v. Railroad* (1853), 1 Fisher, 626; 2 Wall. Jr. 356.

⁸ That the article and the means of producing it may be separately claimed, see *Merrill v. Yeomans* (1877), 94 U. S. 568; 11 O. G. 970.

See also § 475 and notes, *ante*.

§ 532. ¹ That a composition of matter requires but a single Claim, see *Ex parte Wheat* (1879), 16 O. G. 360; *Ex parte Loeser*, (1876), 9 O. G. 837.

² That if the composition consists of well-known ingredients the Claim must enumerate them, see *Ex parte Williams* (1876), 10 O. G. 748.

That a general Claim for a composition of certain ingredients is a Claim for them in the proportions previously described, see *Loutrel v. Mellor* (1871), 1 O. G. 48; 5 Fisher, 153.

³ That a Claim for a chemical composition covers only the same use of the same or equivalent ingredients, see *Goodyear v. Berry* (1868), 2 Bond, 189; 3 Fisher, 439.

the principal composition is a Claim for a different invention, and can be inserted in the same application only when so related to the former that a joinder is permitted.⁴

§ 533. The Claim for a Design: its General Requisites.

A Claim for a design must be as distinct and specific as a Claim for any other invention, if the nature of the design will permit. Nothing beyond the configuration or ornamentation, which constitutes the invention, must be mentioned in the Claim; neither the qualities of the substance upon which the design is imposed, nor the mechanical functions which the substance may thus be enabled to perform, being any part of the design itself.¹ The Claim may consist either of a verbal description of the essential features of the design, or of such references to the drawings as indicate the lines and figures characterizing the invention.² Different designs cannot be embraced in a single Claim; and Claims for distinct designs cannot be joined unless so dependent on each other as to come within the usual rules.³

§ 534. The Claim for an Improvement: its General Requisites.

An improvement is an invention essentially distinct from the original art or instrument to which it pertains; and a Claim for an improvement must, therefore, not only define the improvement, like any other new invention, but also fully and accurately distinguish between it and the old invention.¹ In order

⁴ That a second Claim for a composition of fewer or different ingredients is a Claim for a different invention, and is improper unless the two inventions may be joined in one patent, see *Ex parte Loeser* (1876), 9 O. G. 837.

See also § 476 and notes, *ante*.

§ 533. ¹ That the Claims of a design patent should contain the phrase "as shown and described" so as to limit the patent to the exact design, see *Ex parte Gerard* (1888), 43 O. G. 1234.

That a Claim for a design must not cover a mere function, see *Ex parte Diffenderfer* (1872), 2 O. G. 57.

² That a Claim for "the configura-

tion of the design hereunto annexed when applied to carpeting" is proper, see *Dobson v. Dornan* (1886), 118 U. S. 10; 35 O. G. 750.

³ That there can be no joinder of separate designs, see *Ex parte Gerard* (1888), 43 O. G. 1240.

See also § 477 and notes, *ante*.

§ 534. ¹ That a Claim for an improvement must clearly state the exact improvement made, see *Ex parte McMurray* (1875), 8 O. G. 943; *Whittemore v. Cutter* (1813), 1 Gallison, 478; 1 Robb, 40; *Hill v. Thompson* (1818), 1 Web. 239; 1 Abb. P. C. 304.

That the Claim for an improvement

to accomplish this, such a Claim should confine itself entirely to the characteristics of the improvement made, embracing nothing which is not necessarily connected with or related to it, although the part or group of parts of which the improvement consists will not operate except in union with the original invention.² If it is requisite to the precise definition of the improvement that mention should be made of any features of the original invention, it must be apparent from the language used that these features of the original are not claimed.³ Two or more distinct improvements cannot be joined in the same Claim, though Claims for distinct improve-

must distinguish the new from the old, see *Brown v. Selby* (1871), 2 Bissell, 457 ; 4 Fisher, 363 ; *Bray v. Hartshorn* (1860), 1 Clifford, 538.

That an applicant for an improvement may be required to explicitly distinguish the old and the new, but not to acknowledge the old to be old or make any other admission, see *Ex parte Masicks* (1887), 38 O. G. 1489.

² In *Ex parte McMurray* (1875), 8 O. G. 943, Spear, Act. Com.: (943) "It is always a very difficult and delicate question to determine how subordinate Claims for an improvement in a mechanism of any considerable number of parts, or in any respect complicated, should be limited, and no exact rule can be laid down for such cases. Unquestionably, an applicant having made an improvement upon a previously existing machine may lay claim to the specific part which he has improved, or to any reasonably well-defined group of parts thus improved, even although that part or that group of parts do not alone operate to produce any beneficial result. No one is misled by any such Claim, but understands readily, even if it be not specifically stated, that the improvement is upon a specified part of the machine to which it relates. To require the applicant to specify all the parts necessary to the complete opera-

tion would be to defeat the very object for which he seeks a patent, and would be plainly against reason. But to how small a number of elements he shall reduce his Claim is not so easy to determine ; but each case must be judged in a great measure by itself, care only being taken that the Claim do not mislead."

³ That a Claim to improvements must be limited to them by express terms or fair construction, see *Troy Laundry Mach. Co. v. Bunnell* (1886), 27 Fed. Rep. 810 ; 23 Blatch. 558.

That it is not sufficient that persons skilled in the art can distinguish the improvement from the original invention, but the Claim itself must show it, see *Foxwell v. Bostock* (1864), 10 L. T. Rep. n. s. 144.

That a Claim for an improvement must be limited to the new arrangement, and cannot embrace substitutes different in character and form, merely because they perform the same functions and effect the same results, see *Dyer v. National Hod Elevating Co.* (1885), 24 Fed. Rep. 182.

That a Claim for one of a series of improvements must be restricted to the precise form and arrangement described, see *Bragg v. Fitch* (1887), 121 U. S. 478 ; 39 O. G. 829.