Miller *v.* Mfg. Co., 151 U. S. 186; Palmer *v.* Lozier, 90 Fed. 732; Fassett *v.* Mfg. Co., 62 Fed. 404.

Since, therefore, the invention of the specific means covered by these claims for the special means and the generic invention were for independent inventions, and neither had been given to the public, it was competent for the inventor to take out a patent for each; and we do not perceive that in such case it would be material that the taking out of the one patent was prior to that of the other. — Dayton *v.* Westinghouse, 118 Fed. 562; 55 C. C. A. 390.

No valid reason exists why the patentee of an invention may not enjoy the privilege of a stranger in thereafter obtaining a patent for an independent invention made by him, although it relate to the matter of his former patent, and was described but not claimed, therein, provided he has not dedicated such independent invention to the public. — Dayton *v.* Westinghouse, 118 Fed. 562; 55 C. C. A. 390.

Thomson-Houston *v.* Ohio, 80 Fed. 712.

§ 354. Identity.

The presumption is that Jensen invented something new, or he would not have secured the second patent. Where two patents apparently described and claimed the same article, the question of identity is open for examination, with the presumption in favor of their diversity. — Norton *v.* Jensen, 90 Fed. 415; 33 C. C. A. 141.

Rob. Pat., 896.

Are the two patents for the same invention? Looking first to the letters patent themselves, and comparing their claims we are unable to say that the combination claimed in the earlier is identical with that claimed in the later, since the later specifically claims elements not enumerated in the earlier. As the claims are not coextensive, the fact that the given element is common to both may be of little consequence. The test of identity afforded by a comparison of the claims of the two patents, however, is not conclusive. We must be satisfied further that there are substantial differences, not merely varying descriptions of one invention, or descriptions of a single invention in different applications to use. — Palmer *v.* Brown, 92 Fed. 925; 35 C. C. A. 86.

Miller *v.* Mfg. Co., 151 U. S. 186; Thomson-Houston *v.* Elmira, 71 Fed. 396; Simonds *v.* Hathorn, 90 Fed. 201.

That where a substantial difference exists, in the two methods of dealing with the subject matter, it is not a case of double patenting, see Municipal *v.* National, 117 Fed. 284; 46 C. C. A. 270.

§ 355. Second Patent Void.

It seems to me his second patent must have been taken out as a matter only of greater caution, through fear that, by some possible interpretation of the claims of the first every method of using the electric currents would not be covered. To my mind, this was unnecessary; and unless the patents are to be limited to details, the claims of the first patent cover every form of current particularized in either. I think, therefore, that under Leggett *v.* Oil Co., 149 U. S. 287 and more particularly and clearly under Miller *v.* Mfg. Co., 151 U. S. 186, the second patent is void. (Putnam dissenting.) — Gamewell *v.* Municipal, 61 Fed. 948; 10 C. C. A. 184.

One cannot lawfully have two patents for one invention. When once the invention has been used, there is the consideration of a grant, its value for that purpose is spent, and there is nothing in it on which a second grant can be supported. And this rule holds good though the scope of the patents may be different. One cannot extract an essential element of his invention from a former patent, without which the former patent would not have been granted and make it the subject of a subsequent patent. — Palmer *v.* Lozier, 90 Fed. 732; 33 C. C. A. 255.

Miller *v.* Mfg. Co., 151 U. S. 186.

That where two patents have been taken out on the same general invention and it appears that the combination of the first patent would be inoperative without including the combination claimed in the second patent, the second patent is void, see Industrial *v.* Wilcox, 112 Fed. 535; 50 C. C. A. 387.

Miller *v.* Mfg. Co., 151 U. S. 186.

DOUBLE PATENTING.

§ 356. General Rules.

If two patents be granted for the same invention the latter is void. — Suffolk *v.* Hayden, 70 U. S. 315; 18 L. Ed. 76.

It is hardly necessary to remark that the patentee could not include in a subsequent patent any invention embraced or described in a prior patent to himself, any more than he could an invention embraced or described in a prior patent to a third person. Indeed, not so well; because he might get a patent for an invention before patented to a third person in this country, if he could show that he was the first and original inventor, and if he should have an interference declared. — James *v.* Campbell, 104 U. S. 356; 26 L. Ed. 786.

A man cannot have two separate patents for the same invention. The later patent is void. — McCreary *v.* Pennsylvania, 141 U. S. 459; 35 L. Ed. 817; 12 S. Ct. 40.

A later application covering the same invention as a former application would be void. — Washburn *v.* Beat Em All, 143 U. S. 275; 36 L. Ed. 154; 12 S. Ct. 443.

Suffolk *v.* Hayden, 70 U. S. 315.

Two valid patents for the same invention cannot be granted either to the same or to a different party. — Miller *v.* Eagle, 151 U. S. 186; 38 L. Ed. 121; 14 S. Ct 310.

Suffolk *v.* Hayden, 70 U. S. 315; James *v.* Campbell, 104 U. S. 382; Mosler *v.* Mosler, 127 U. S. 355; Underwood *v.* Gerber, 149 U. S. 224; Odiorne *v.* Amesbury, 2 Mason, 28.

When a patentee secures two patents for the same invention, the later patent is void. — Fassett *v.* Ewart, 62 Fed. 404; 10 C. C. A. 441.

Miller *v.* Mfg. Co., 151 U. S. 186.

The mere fact that a subsequent patent embraces broader claims than those of the prior patent, which might have been made in the prior patent, does not take it outside the rule of Miller *v.* Mfg. Co. that a subsequent patent for the same invention is void. — Fassett *v.* Ewart, 62 Fed. 404; 10 C. C. A. 441.

A subsequent patent, especially to the same patentee for the same invention, even embracing broader claims is void. — Russell *v.* Kern, 69 Fed. 94; 16 C. C. A. 154.

Miller *v.* Mfg. Co., 151 U. S. 186; Oval *v.* Sandy Creek, 69 Fed. 285; Heald *v.* Rice, 104 U. S. 737.

The rule in Miller *v.* Mfg. Co., 151 U. S. 198 construed and explained at length. — Thomson-Houston *v.* Elmira, 71 Fed. 396; 18 C. C. A. 145.

Suffolk *v.* Hayden, 3 Wall. 315; Barbed Wire Case, 143 U. S. 275; Accumulator *v.* Brush, 52 Fed. 130.

The improvement described in claim 1 of the second patent, having been distinctly claimed in a previous patent, is not patentable, unless the last patentee was the earlier inventor. — Morrin *v.* Lawler, 99 Fed. 977; 40 C. C. A. 204.

James *v.* Campbell, 104 U. S. 356; Machine Co. *v.* Hedden, 148 U. S. 490; Mathews *v.* Flower, 25 Fed. 830.

§ 357. Disclaimer in Later Patent.

The switching devices having been fully described, the matter of disclaimer inserted in the later patent is of no more value in determining its scope and interpretation as to the claims in which the switches are an element, than is the matter of disclaimer inserted in the earlier patent as to the claims in which the contact device is an element. — Thomson-Houston *v.* Hoosick, 82 Fed. 461; 27 C. C. A. 419.

That the settlement of priorities on interference, where the patentee has a plurality of applications, relating to the same general subject matter, does not entitle him to claim the counts awarded him on the interference to be amended into either application, regardless of the specification and the particular species of the application, see Nelson *v.* Farmer, 95 Fed. 145; 37 C. C. A. 32.

The complainant relies upon the disclaimer of the earlier patent: "I do not here claim any of the features also shown and claimed in my application and serial Nos. 157,771," etc. Though reference is here made to the application for the patent in suit, it is evident that a patentee cannot thus withdraw the invention which actually is embodied in the structure claimed. He cannot patent the structure, and by disclaimer withdraw the invention which makes the structure patentable. — Otis *v.* Portland, 127 Fed. 557; 62 C. C. A. 339.

Rob. Pat. sec. 465; Miller *v.* Eagle, 151 U. S. 186; Palmer *v.* Lozier, 90 Fed. 745.

§ 358. Extending the Monopoly.

When one inventor makes a generic invention and also subordinate, specific inventions, and presents the whole series in a set of contemporaneous applications, the patentee must not be enabled, by an ingenious use of general terms, to enlarge the boundaries of each invention, to extend each into the borders of another, and obtain a series of overlapping patents. — Elec. Accum. Co. *v.* Brush 52 Fed. 130; 2 C. C. A. 682.

Now, after this lavish issue of patents involving the same subject matter, and to the same patentees, could the monopoly be still further broadened and prolonged by the grant of a later patent? We have no hesitation in responding negatively. Such an extension of exclusive privileges would be a sheer abuse of the patent laws. — Reynolds *v.* Standard, 68 Fed. 483; 15 C. C. A. 516.

Following, Miller *v.* Eagle, 151 U. S. 186.

He made a machine which was a perfect embodiment of his generic idea, and which he thought a better mechanism. He applied for a patent on this machine, knowing it to be a full embodiment of his generic idea, and erroneously thinking it better as a practical mechanism. He did not patent an improvement upon his old mechanism. Surely, under such circumstances, he cannot now invalidate or limit his prior patent by showing that all he had claimed in his first patent had previously been invented by himself. — Otis *v.* Portland, 127 Fed. 557; 62 C. C. A. 339.

The patentee cannot subsequently start afresh and say: "I have now another machine, which is exactly like the old one in the use of the generic idea. I desire a patent upon it, but I do not claim the feature in which the machine of my new application differs from the old, but I claim what is exactly the same as the old. I claim that machine again, and all others containing the same invention." Yet this is substantially the case before us. — Otis *v.* Portland, 127 Fed. 557; 62 C. C. A. 339.

It is insisted that though patent No. 757,762 was applied for more than two years after patent No. 736,999, and was allowed almost eight months afterwards, it constitutes the generic patent — No. 736,999 being for a specific invention only. This is not a case in which a patentee, having first made application for a patent for a generic invention, has subsequently applied for patents for specific improvements. This is a case in which a patentee, possessed of an alleged generic idea, elected to first apply for a patent for a specific embodiment embracing the essential feature of the generic idea, and later specifying such essential feature in another specific embodiment, claims that the generic idea growing out of such essential feature, belongs to the later, and not to the earlier, patent. To allow this, it seems to us, would be to make the second patent overlap the first, a result that involves the patentee in this dilemma, either that his second patent is not generic in the respect named, or that it is a double patenting. — Morse Chain *v.* Link Belt, 164 Fed. 331; C. C. A.

§ 359. Seniority and Priority.

As between two patents for the same invention priority of date in filing does not control. — Birmingham *v.* Gates, 78 Fed. 350; 24 C. C. A. 132.

Miller *v.* Mfg. Co., 151 U. S. 186.

Where two patents are issued on the same day by the Patent Office, and there is no other evidence of seniority between them than such as appears from their serial numbers, the earlier in number must be regarded the senior and the earlier in publication. — Crown *v.* Standard, 136 Fed. 841; 69 C. C. A. 200.

If the invention of the later patent is patented by the earlier patent, the earlier must, of course, invalidate the later, for there cannot be two valid patents for the same invention, and the later patent is therefore void. — Crown *v.* Standard, 136 Fed. 841; 69 C. C. A. 200.

§ 360. Unitary Device.

That where two patents from the same inventor disclose and cover the same general invention, and each covers separate and minor inventions, the inventions claimed being inseparably involved in the same patents, the later patent is void, see Thomson-Houston *v.* Hoosick, 82 Fed. 461; 27 C. C. A. 419.

Miller *v.* Mfg. Co., 151 U. S. 198.

The device patented in the first patent is the same as that in the second. The same elements are claimed in combination in the first as in the second. A difference in statement of their functions cannot and does not make them different claims or different combinations. — Thomson-Houston *v.* Jeffery, 101 Fed. 121; 41 C. C. A. 247.

Thomson-Houston *v.* Hoosick, 82 Fed. 461.

It is identical with the essential feature of the patent in suit and it comes within the rule that forbids the issuance of a second patent to a patentee for an alleged invention, the essential characteristic of which has been already patented to the same patentee. — Newark *v.* Ryan, 102 Fed. 693; 42 C. C. A. 594.

The matter sought to be covered by the later patent is inseparably involved in the matter embraced in the earlier patent, and, therefore, the claims in controversy are void. — Thomson-Houston *v.* Western, 158 Fed. 813; 86 C. C. A. 73.

Miller *v.* Mfg. Co., 151 U. S. 198.

§ 361. Miscellaneous Rules.

The defendants insist that as 337,298 is the earlier patent, and is for the same invention as 337,299, the latter patent is void. This conclusion would be true if the premises were true. The application was filed on the same day, the patents were issued on the same day, and are owned by the same person. The testimony shows that it can never be ascertained which patent actually first received the final signature which rendered it a complete and final deed; the mere fact that one has an earlier number signifies merely that the patent office followed Brush's alphabetical order; so that a judicial ascertainment of the fact of priority is impossible, and there are no known presumptions which can be resorted to upon which to base a finding. The owner of both patents has elected to regard 337,299 as the one upon which it will rest its title to a monopoly, and we are of opinion that it had such power of choice. What would be the condition of separate owners of two separate and contemporaneous patents for the same inventions? is a question which has not yet arisen but it is obviously improper that 337,298 should be left in a condition where it can be assigned or made the subject of sale. It has been suggested that a disclaimer should be filed, but the sections to the statute in regard to disclaimer, were not intended for, and do not seem applicable to, a case of this sort in which the patentee was the actual and first inventor of the whole of the described and patentable thing which is specified in the patent. It, therefore, seems proper that a final decree should be framed in accordance with the circumstances of the case, and should, in connection with the finding of the validity of the specified claims of 337,299, adjudge 337,298 to be inoperative, and prohibit its assignment for sale. — Elec. Accum. Co. *v.* Brush, 52 Fed. 130; 2 C. C. A. 682.

The owner of two conflicting patents is not bound under R. S. 4918, to move to cancel the senior patent before he can maintain suit upon the other patent. — Western Elec. Co. *v.* Sperry, 59 Fed. 295; 8 C. C. A. 129.

Disapproving, Roll Paper Co. *v.* Knapp, 44 Fed. 609.

It is contended that the invention described and claimed in the earlier patent is for one form of the alleged invention described in the later patent, and covered by the first of those claims thereof, and that no one could use the invention of the earlier patent without infringing these later claims. The question there raised is a serious one, but we do not deem it necessary to consider it. — Westinghouse *v.* Edison, 63 Fed. 588; 11 C. C. A. 342.

Miller *v.* Mfg. Co., 151 U. S. 186.

The first two claims contain no patentable improvement upon the form specifically described in the claims of its predecessor, and are void. — Westinghouse *v.* N. Y., 63 Fed. 962; 11 C. C. A. 528.

At the bar the United States rested the point of issuance of a subsequent patent for the same invention, Miller *v.* Mfg. Co., 151 U. S. 186. The principle of this decision is evident and was stated as early as 1865 in Suffolk *v.* Hayden, 3 Wall. 315; and appears from the record that it was recognized by the patent office before Miller *v.* Mfg. Co. was decided. We may remark that the facts in the case at bar on their face are not like those of Miller *v.* Mfg. Co. as here the two patents claimed to interfere were not issued to the same applicant; and the acquirement, after it issued by the Am. Bell Tel. Co. of the Berliner patent of Nov. 2, 1880 would not necessarily estop the assignee. — Am. Bell. Tel. Co. *v.* U. S. 68 Fed. 542; 15 C. C. A. 569.

To avoid the objection of double patenting, it is not enough to show that the prior patent claims a specific machine, and that the later patent contains broader claims, which embrace both the prior specific machine and other machines as well. Two patents may be regarded as for the same invention, though one claims only a special machine, and the other claims broadly a genus which includes the former. — Otis *v.* Portland, 127 Fed. 557; 62 C. C. A. 339.

Miller *v.* Eagle, 151 U. S. 186; Rob. Pat. secs. 464, 465.

The question whether two patents are for the same invention is to be determined from a comparison of the documents themselves, no extrinsic evidence being necessary to enable the court to ascertain their meaning and true conclusion. — Thomson-Houston *v.* Western, 158 Fed. 813; 86 C. C. A. 73.

The change in phraseology between the claims of the two patents import nothing of substance into the claims of the later patent which, in different language, describe the same combinations covered by the claims of the earlier patent. — Thomson-Houston *v.* Western, 158 Fed. 813; 86 C. C. A. 73.

DRAWINGS.

Statutory Provisions § 362
General Statement and General | Rules § 363
See — Claims § 192

§ 362. Statutory Provisions.

* * * A copy of the specification and drawings shall be annexed to the patent and be a part thereof. — R. S. 4884.

When the nature of the case admits of drawings, the applicant shall furnish one copy signed by the inventor or his attorney in fact, and attested by two witnesses, which shall be filed in the Patent Office; and a copy of

the drawing, to be furnished by the Patent Office, shall be attached to the patent as a part of the specification. — R. S. 4889.

Sec. 4916, which provides for reissues, has the following in regard to drawings in reissue cases:

* * * nor in case of a machine patent shall the model or drawings be amended, except each by the other; but where there is neither model nor drawing, amendments may be made upon proof satisfactory to the Commissioner * * *

§ 363. General Statement and General Rules.

Since the drawings form a part of the specification, special rules relating thereto will be found under *Specification*.

Where the drawings merely show an alternative construction and both covered by same claims, the difference is not material. — Schreiber *v.* Grimm, 72 Fed. 671; 19 C. C. A. 67.

Bussell *v.* Stevens, 137 U. S. 423; Wells *v.* Curtis, 66 Fed. 318.

A drawing is not to be regarded as a working plan, unless it is so stated in the specification. — Elgin *v.* Creamery, 80 Fed. 293; 25 C. C. A. 426.

Caverly *v.* Deere, 66 Fed. 305.

The object of the drawings filed in the patent office is attained if they clearly exhibit the principles involved, and, in a case like this, rigid adherence to the dimensions thus exhibited is not required or expected, and if an intelligent mechanic would so proportion the dimensions as to secure practical results, inutility is not demonstrated by experiments with material identical in form and proportion of parts with the drawings in the patent. — Crown *v.* Aluminum, 108 Fed. 845; 48 C. C. A. 72.

The drawings are not required to be working plans. They must be read in connection with the description and claims, and any inferences arising from omissions or inconsistencies in the drawings must yield to a legally sufficient specification. — Western *v.* American, 131 Fed. 75; 65 C. C. A. 313.

That an obvious error in a drawing, which would not mislead any person skilled in the art, is insufficient to defeat a patent, see Edison *v.* Novelty, 167 Fed. 977; C. C. A.

EMPLOYER AND EMPLOYEE.

§ 364. General Statement.

No statutory provision exists except that relating to government employees. Those provisions and the special rulings as to employees of the government will be found under the title *Government*. Questions of title and rights as between employers and employees will also be found under *Assignment* and *License*.

§ 365. Contract — Future Inventions.

Complainant and defendant contracted that in consideration of the employment of defendant and wages paid him, defendant would give complainant the exclusive use of any improvements he might make upon their particular machines while in their employ or after. *Held:* such argument to be neither unconscionable, unreasonable nor contrary to public policy. — Bonsack *v.* Hulse, 65 Fed. 864; 13 C. C. A. 180.

Registering Co. *v.* Sampson, L. R. 19 Eq. 465; 1 Sedg. Dam. 455; Horner *v.* Graves, 7 Bing. 735; Ammunition *v.* Nordenfelt, 1 Ch. 630; Match *v.* Rosber, 106 N. Y. 473; Morse *v.* Morse, 103 Mass. 73.

We now pass to the defence that the contract was not enforceable in equity upon the theory of lack of consideration and lack of mutuality. This contract, however, was not without consideration. It was not only by its own express terms in consideration of the employment of the defendant, but this contract was signed and delivered before the employment actually commenced, and before the defendant was permitted to enter the complainant's factory. The hiring, the engagement to pay wages and the introduction of the defendant into the complainant's establishment and to its methods and processes, constituted a valid consideration for his agreement to assign his inventions made during the term of employment. — Mississippi *v.* Franzen, 143 Fed. 501; 74 C. C. A. 135.

Bonsack *v.* Hulse, 65 Fed. 864; Thibodeau *v.* Hildreth, 124 Fed. 892; Rob. Pat. sec. 414; Green *v.* Richards, 23 N. J. Eq. 32, 35; Grove *v.* Hodge, 55 Fa. 504, 516.

§ 366. License — Implied.

For equitable rights of employer, see Hapgood *v.* Hewitt, 119 U. S. 226; 30 L. Ed. 369; 7 S. Ct. 193.

Distinguishing: McClurg *v.* Kingsland, 42 U. S. 202; Continental *v.* Empire, 8 Blatchf. 295; Whiting *v.* Graves 3 B. &. A. 222; Wilkins *v.* Spafford, 3 B. & A.. 274.

An employee or shop license growing out of the employment of the inventor, confers an unassignable right only. — Hapgood *v.* Hewitt, 119 U. S. 226; 30 L. Ed. 369; 7 S. Ct. 193.

Troy *v.* Corning, 55 U. S. 193; Oliver *v.* Rumford, 109 U. S. 75.

Where the employee invents in the line of his employment with the tools and at the expense of his employer, the fact that his wages are not increased on account of such services as was the case in McClurg *v.* Kingsland, 42 U. S. 202, makes no vital difference. — Solomons *v.* U. S. 137 U. S. 342; 34 L. Ed. 667; 11 S. Ct. 88.

When employee allows his invention to be constructed and used by his employer before patent he cannot claim royalty or right of injunction thereafter. — Dable *v.* Flint, 137 U. S. 41; 34 L. Ed. 613; 11 S. Ct. 8.

Wade *v.* Metcalf, 129 U. S. 202.

Where employee makes an invention in the shops and with the tools of employer, the employer gains an implied license, and such implied license may be succeeded to by a corporation as successor in business, if such course is acquiesced in by the inventor. — Lane *v.* Locke, 150 U. S. 193; 37 L. Ed. 1049; 14 S. Ct. 78.

McClurg *v.* Kingsland, 42 U. S. 202; Solomons *v.* U. S. 137 U. S. 342.

When an employee made and introduced his invention in employer's furnaces and told his employer he could use the same so long as he remained in defendant's employ, such facts gave defendant an implied license, at least during the period of employment of plaintiff. — Keyes *v.* Eureka, 158 U. S. 150; 39 L. Ed. 920; 15 S. Ct. 772.

The fact that the invention was made and the drawings prepared outside the hours and the shops of the employer, so long as the invention was reduced to practice and made in the employer's shops by the employee and with his consent, does not secure him the right to damages for infringement by his employer. — Gill *v.* U. S. 160 U. S. 426; 40 L. Ed. 480; 16 S. Ct. 322.

An employee paid by salary or wages, who devises an important method of doing his work, using the property or labor of his employer to put his invention into practical form, and assenting to the use of such improvements by his employer, cannot, by taking out a patent upon such invention, recover a royalty or other compensation for such use. — Gill *v.* U. S. 160 U. S. 426; 40 L. Ed. 480; 16 S. Ct. 322.

Pennock *v.* Dialogue, 27 U. S. 1; Grant *v.* Raymond, 31 U. S. 218; McClurg *v.* Kingsland, 42 U. S. 202; Solomons *v.* U. S. 137 U. S. 342; Lane *v.* Locke, 150 U. S. 193; McAleer *v.* U. S. 150 U. S. 424; Keyes *v.* Eureka, 158 U. S. 150.

There was some evidence to show that the original patterns were destroyed by fire before the machines sold by appellant were made and it is insisted that the scope of the license should be limited by the life of the identical patterns. The duration and scope of a license must depend upon the nature of the invention and the circumstances out of which an implied license is presumed, and both must at last depend upon the intention of the parties. — Withington *v.* Kinney, 68 Fed. 500; 15 C. C. A. 531.

Rob. Pat. secs. 809-811; Montross *v.* Mabie, 30 Fed. 4.

Complainant was employed as an expert machinist to devise and construct an improved machine and to direct the making of patterns for the same for machine to be made and sold. Later, complainant obtained a patent, and after ten years brought suit. *Held:* Upon this state of facts, we conclude that the appellee must be presumed to have granted to appellant's licensor a personal license to make and sell machines embodying the improvements covered by his patent. — Withington *v.* Kinney, 68 Fed. 500; 15 C. C. A. 531.

McClurg *v.* Kingsland, 1 How. 202; Solomons *v.* U. S. 137 U. S. 342; Lane *v.* Locke, 150 U. S. 193; Hapgood *v.* Hewitt, 119 U. S. 226.

The case is, therefore, of an inventor, who was a workman in the employ of another, manufactures for him, in his shop, and with his materials, and upon weekly wages, machines which the employer uses as a part of his tools, without knowledge of any objection thereto, and for which the inventor during the terms of his employment, obtains a patent and thereafter seeks to restrain the employer from the use of the particular machine or machines which had been thus made in the employer's shop, under the supervision of the employee, and apparently as a part of his ordinary mechanical work. On the authority of Gill *v.* U. S., 160 U. S. 426, the employee-patentee was estopped. — Blauvelt *v.* Interior, 80 Fed. 906; 26 C. C. A. 243.

§ 367. Rights of — Employee.

Persons employed, as much as employers, are entitled to their own independent inventions, and if the suggestions communicated constitute the

whole substance of the improvement the rule is otherwise, and the patent, if granted to the employer, is invalid because the real invention or discovery belongs to the person who made the suggestion. — Union *v.* Vandeusen, 90 U. S. 530; 23 L. Ed. 128.

Agawam *v.* Jordan, 7 Wall. 602.

When a person has discovered a new and useful principle in a machine manufacture or composition of matter, he may employ other persons to assist in carrying out that principle, and if they, in the course of experiments arising from that employment, make discoveries ancillary to the plan and preconceived design of the employer, such suggested improvements are in general to be regarded as the property of the party who discovered the original principle, and they may be embodied in his patent as part of his invention. — Union *v.* Vandeusen, 90 U. S. 530; 23 L. Ed. 128.

As to rights of a person employed to invent, see Hapgood *v.* Hewitt, 118 U. S. 226; 30 L. Ed. 369; 7 S. Ct. 193.

McClurg *v.* Kingsland, 42 U. S. 202; Continental *v.* Empire, 8 Blatchf. 295; Whiting *v.* Graves, 3 B. & A. 222; Wilkins *v.* Spafford, 3 B. & A. 274.

In the absence of evidence of an agreement that the employer should have any interest in any patentable improvement which the employee might make during the period of his employment, it would seem that the title to the invention made or to any patent subsequently obtained by him, would be unaffected by the fact of his service and in the use of his employer's shop, materials and the service of his employees while devising and perfecting his invention. — Withington *v.* Kinney, 68 Fed. 500; 15 C. C. A. 531.

Hapgood *v.* Hewitt, 119 U. S. 226.

§ 368. Rights of — Employer.

The inventor, while in the employ of the defendant made his invention and perfected the same with the tools and while under pay of defendant, and in his shops. Defendant increased the inventor's wages by reason of such invention. The invention was put in practice by plaintiff in defendant's shops and used without any agreement or license. Subsequently the inventor quit from another cause and this suit was brought. *Held:* That such employment and conduct gave the employer a shop right to said invention. — McClurg *v.* Kingsland, 1 How. 202; 11 L. Ed. 102.

Note: This leading case has generally been construed too broadly. The court did not hold in express terms that the mere employment or the extra pay constituted the license, independent of the subsequent conduct. This case is good for what it holds, but it by no means establishes the relations of employer and employee definitely.

Persons employed, as much as employers, are entitled to their own independent inventions, but where the employer has conceived the plan of an invention and is engaged in experiments to perfect it, no suggestion from an employee, not amounting to a new method or arrangement, is sufficient to deprive the employer of the exclusive property in the perfected improvement. But where the suggestions go to make up a complete and perfect machine, embracing the substance of all that is embodied in the patent subsequently issued to the party to whom the suggestions were made, the patent is invalid, because the real invention or discovery belonged to another. — Agawam *v.* Jordan, 74 U. S. 583; 19 L. Ed. 177.

Pitts *v.* Hall, 2 Blatchf. 234; Allen *v.* Rawson, 1 Man. G. & S. 574; Alden *v.* Dewey, 1 Story, 336; Minters Pat. 1 Web. P. C. 132; Curt. Pat. 99; Reed *v.* Cutter, 1 Story, 599.

No one is entitled to a patent for that which he did not invent unless he can show a legal title to the same from the inventor or by operation of law; but when a person has discovered an improved principle in a machine, manufacture or composition of matter, and employs other persons to assist him in carrying out that principle, and they in the course of experiments arising from that employment make valuable discoveries ancillary to the plan and preconceived design of the employer, such suggested improvements are in general to be regarded as the property of the party who discovered the original improved principle, and may be embodied in his patent as a part of his invention. — Agawam *v.* Jordan, 74 U. S. 583; 19 L. Ed. 177.

A manufacturing corporation which has employed a skilled workman, for a stated compensation, to take charge of its works, and to devote his time and services to devising and making improvements in articles there manufactured, is not entitled to a conveyance of patents obtained for inventions made by him while so employed, in the absence of express agreement to that effect. — Dalzell *v.* Dueber, 149 U. S. 315; 37 L. Ed. 749; 13 S. Ct. 886.

Hapgood *v.* Hewitt, 119 U. S. 226.

That an agreement by an employee to keep forever secret for the benefit of his employer any invention or discovery he may make during the term of his employment, is not unconscionable, see Thibodeau *v.* Hildreth, 124 Fed. 892; 60 C. C. A. 78.

We do not think that defendant is estopped, by reason of the relation of the parties and his own conduct, to deny such equitable title in complainant. Both must rest upon the same basis of fact and law. Whether the complainant would have been justified in claiming what is called a shop right or a right to a license, irrevocable or otherwise, is not the question raised by its bill. The claim is for the whole and exclusive title, and the demand for a legal assignment of the same. — Pressed Steel *v.* Hansen, 137 Fed. 403; 71 C. C. A. 207.

§ 369. Miscellaneous Rulings.

Suggestions from another, made during the progress of experiments, in order that they may be sufficient to defeat a patent subsequently issued, must have embraced the plan of the improvement and must have furnished such information to whom the communication was made that it would have enabled an ordinary mechanic, without the exercise of any ingenuity and special skill on his part to construct and put the improvement in successful operation. — Agawam *v.* Jordan, 74 U. S. 583; 19 L. Ed. 177.

This evidence brings the case clearly within the terms of the decision of McClurg *v.* Kingsland, 1 How. 202, where it was declared that if a person employed in the manufactory of another, while receiving wages, makes experiments at the expense and in the manufactory of the employer has his wages increased in consequence of the useful result of the experiments, makes the article invented, and permits his employer to use it, no compensation for its use being paid or demanded, and then obtains a patent for it, the patent is invalid and void.

And as the employer could defend himself on the ground of public use, so could a third person.

And the fact that the employer just before application purchased an in-

terest in the patent to be granted does not avoid the fact of public use by him. — Worley *v.* Loker, 104 U. S. 340; 26 L. Ed. 821.

Pardy was a mechanic and patent solicitor. Hooker employed him to get up a machine and gave Pardy his own ideas as to how the desired result could be accomplished. The agreement was that Hooker was to pay all cost of the work and pay Pardy for his services, and was to own and control the patent that should be issued covering the machine. Hooker paid all the cost of the machines and paid Pardy in full. We are of opinion that such suit (for infringement) cannot be sustained, in view of the distinct agreement between Hooker and Pardy. We are of the opinion, however, that the court below was, in view of the evidence, in error in adjudging Pardy was not the inventor of the machine patented. Hooker knew, or must be held to have known, that such patent could not have been issued except upon the oath that Pardy was the inventor. Hooker did not himself apply for such patent, and there is nothing to indicate that he ever contemplated doing so. It is true, as has been said, that he gave Pardy his own ideas and employed him to get up such a machine as he (Hooker) desired, but the accomplishment of the desired end was evidently left to Pardy. The court should not have adjudged the patent to be void, or that Pardy was not the inventor. — Pardy *v.* Hooker, 148 Fed. 631; 78 C. C. A. 403.

EQUITY.

§ 370. The Statutes.

General jurisdiction of courts of equity in patent causes is given under 629 R. S. The specific powers of courts of equity in such actions is found in 4921 R. S., from which is quoted:

The several courts vested with jurisdiction of cases arising under the patent laws shall have power to grant injunctions according to the course and principles of courts of equity, to prevent the violation of any right secured by patent, on such terms as the court may deem reasonable; and upon a decree being rendered in any such case for an infringement, the complainant shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby; and the court shall assess the same or cause the same to be assessed under its direction. And the court shall have the same power to increase such damages, in its discretion, as is given to increase the damages found by verdicts in actions in the nature of actions of trespass upon the case.

* * * * * * * * * * * *

That said courts (U. S. circuit courts), when sitting in equity for the trial of patent causes, may empanel a jury of not less than five and not more than twelve persons, subject to such general rules in the premises as may, from time to time, be made by the Supreme Court, and submit to them such questions of fact arising in such cause as such circuit court shall deem expedient.

And the verdict of such jury shall be treated and proceeded upon in the same manner and with the same effect as in the case of issues sent from chancery to a court of law and returned with such findings.

Further consideration of this subject will be found under *Jurisdiction*, especially under §§ 717–720.

§ 371. Jurisdiction.

A bill in equity for a naked account of profits and damages against an infringer cannot be sustained; that such relief ordinarily is incidental to some other equity, the right to enforce which secures to the patentee his standing in court; that the most general ground for equitable interposition is, to recover to the patentee the enjoyment of his specific right by injunction, against a continuance of the infringement, but that grounds of equitable relief may arise other than by way of injunction as when the title of the complainant is equitable merely, or equitable interposition is necessary on account of the impediments which prevent a resort to remedies purely legal; and such an equity may arise out of and inhere in the nature of the account itself, springing from special and peculiar circumstances which disable the patentee from a recovery at law altogether, or render his remedy in a legal tribunal difficult, inadequate and incomplete; and as such cases cannot be defined more exactly, each must rest upon its own peculiar circumstances, as furnishing a clear and satisfactory exception from the general rule. — Root *v.* Ry. 105 U. S. 189; 26 L. Ed. 975.

It is the fundamental characteristic and limit of the jurisdiction in equity that it cannot give relief where there is a plain and adequate and complete remedy at law; and hence it has no original, independent and inherent power to afford redress for breaches of contract or torts by awarding damages; for to do that was the very office of proceedings at law. When, however, relief was sought which equity alone could give, as by way of injunction to prevent a continuance of the wrong, in order to avoid multiplicity of suits and to do complete justice, the court assumed jurisdiction to award compensation for the past injury, not, however, by assessing damages, which was the peculiar office of a jury, but requiring an account of profits, on the ground that if any had been made, it was equitable to require the wrong doer to refund them, as it would be inequitable that he should make a profit out of his own wrong. — Root *v.* Ry., 105 U. S. 189; 26 L. Ed. 975.

It is impossible, we think, to maintain that the Act of 1870 was meant to obliterate the distinctions between the two jurisdictions, or even to confuse the boundaries between them. It is the settled doctrine of this court that this distinction of jurisdiction between law and equity, is constitutional to which the 7th Amendment forbids any infringement of the right of trial by jury, as fixed by the common law. And the doctrine applies to patent cases as well as to others. — Root *v.* Ry. 105 U. S. 189; 26 L. Ed. 975.

A court of equity is to decide on the law and fact (LeGuen *v.* Gouveneur, 1 Johns. Cas. 500) and an appeal in equity is an appeal upon the law and fact involved in the case (Adams, Eq., 375) and that, "in absence of any restrictive clauses, every appellate tribunal is clothed with all the powers of the tribunal appealed from, and is bound to exercise them upon the same principles," (Briggs Petition, 29 N. H. 553) and "ordinarily, from the nature of judgments, the decision of an appellate tribunal must have as great force, at least, as the judgment of the inferior tribunal upon the same matter would have if no appeal had been taken." (Blake *v.* Oxford, 64 N. H. 302.) — Richmond *v.* Atwood, 52 Fed. 10; 2 C. C. A. 596.

For general discussion of equity jurisdiction see Crown *v.* Aluminum, 108 Fed. 845; 48 C. C. A. 72.

Hoe *v.* Knapp, 27 Fed. 204; New York *v.* Hollingsworth, 56 Fed. 224; Packard *v.* Lacing, 70 Fed. 66; Germain *v.* Wilgus, 67 Fed. 598; Root *v.* Railway, 105 U. S. 189; Shaw *v.* Cooper, 7 Pet. 292; Walk. Pat. sec. 106.

§ 372. Miscellaneous.

We are aware of no rule which converts a court of equity into an instrument for the punishment of simple torts. — Livingston *v.* Woodworth, 15 How. 546; 14 L. Ed. 809.

A court of equity will not interfere to enjoin even a pending suit at law, much less the bringing of one, in the future, when the theory of the bill is that there is a perfect defense to each suit. — Hapgood *v.* Hewitt, 119 U. S. 226; 30 L. Ed. 369; 7 S. Ct. 193.

Grand *v.* Winegar, 82 U. S. 373; 1 High Injunctions, secs. 89-93 & cases.

A court of equity will not grant a decree on another ground, where the bill charges actual fraud as the ground of relief, and the fraud is not proven. — Dashiell *v.* Grosvenor, 66 Fed. 334; 13 C. C. A. 593.

The evidence also shows that Tremaine & Pain had constructed the apparatus, and put it in use in the hall of the Aeolian Company in New York on an organ of the Ferrand & Votey Organ Company built for the Aeolian Company, as early as 1895, and it was there publicly used and exhibited in actual use for playing the organ for at least two years. This was sufficient to enable appellees to maintain this action without showing that it had been in constant use ever since. — Los Angeles *v.* Aeolian, 143 Fed. 880; 75 C. C. A. 88.

Pitts *v.* Wemple, 1 Biss. 87; Stitt *v.* Easton, 22 Fed. 649; Masseth *v.* Johnston, 59 Fed. 613.

Note: This rule (Hawley, J., Gilbert and Morrow, J. J., concurring) is, to say the least startling, if the opinion is correctly reported. It will be noted that the patent sued on is that to Tremaine & Pain, and that the *use* shown by the evidence was that of *the complainant and its predecessor in business of the device of the patent in suit.*

EQUIVALENTS.

§ 373. General Statement and Definitions.

The Patent Statute does not use the word equivalent. The doctrine has been long and slow in development; and since, in every case, the question is likely to be quite as much a question of fact as of law, the rules which have been established should be regarded rather as rules of evidence than as fixed rules. The subject of equivalents also arises under *Claims — Construction,* and under *Infringement — Combinations — Identity.*

The term equivalent, when speaking of machines, has a certain definite meaning, but when used with regard to chemical action of such fluids as can be discovered only by experiment, it only means equally good. — Tyler *v.* Boston, 74 U. S. 327; 19 L. Ed. 93.

Devices in one machine may be called by the same name as those contained in another, and yet they may be quite unlike in the sense of the patent law, in a case where those in one of the machines perform different functions from those in the other. In determining about similarities and differences, courts of justice are not governed merely by the names of things; but they look at the machines and their devices in the light of what they do or what office or function they perform, and how they perform it, and find that a thing is substantially the same as another, if it performs substantially the same function or office in substantially the same way to obtain substantially the same result, and that devices are substantially different when they perform different duties in a substantially different way, or produce a substantially different result. — Bates *v.* Coe, 98 U. S. 31; 25 L. Ed. 68.

Cahoon *v.* Ring, 1 Cliff. 620.

Equivalents may be claimed by a patentee of an invention consisting of a combination of old elements or ingredients, as well as of any other valid patented improvement, provided the arrangement of parts comprising the invention is new, and will produce a new and useful result. Such a patentee may doubtless invoke the doctrine of equivalents as against an infringer of the patent; but the term "equivalent" as applied to such an invention, is special in its signification, and somewhat different from what is meant when the term is applied to an invention consisting of a new device or an entirely new machine. — Imhauser *v.* Buerk, 101 U. S. 647; 25 L. Ed. 945.

In this sense the mechanical devices used by the defendant are known substitutes or equivalents employed in complainant's machine to effect the same result; and this is the proper meaning of the term "known equivalent," in reference to a pioneer machine such as that of complainant. Otherwise, a difference in the particular devices used to accomplish a particular result in such a machine would always enable a defendant to escape the charge of infringement, provided such devices were new with the defendant in such a machine, because, as no machine for accomplishing the result existed before that of the plaintiff, the particular device alleged to avoid infringement could not have existed or been known in such a machine prior to the plaintiff's invention. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

An equivalent, in the law of patents, is defined to be "any act or substance which is known in the arts as a proper substitute for some other art or substance, employed already as an element in an invention, whose substitution for that other act or substance does not in any manner vary the idea of means. It possesses three characteristics: (1) It must be capable of performing the same office in the invention as the act or substance whose place it supplies; (2) it must relate to the form of embodiment alone, and not affect in any degree the idea of means; (3) it must have been known in the arts, at the date of the patent, as endowed with this capability." — Duff. Mfg. Co. *v.* Forgie, 59 Fed. 772; 8 C. C. A. 261.

1 Rob. Pat. sec. 247.

One who claims and secures a patent for a new machine thereby necessarily claims and secures a patent for every mechanical equivalent for the device, because, within the meaning of the patent law, every mechanical equivalent of a device is the same thing as the device itself. A device which is constructed on the same principle, which has the same mode of operation, and which accomplishes the same result as another by the same means, or by equivalent mechanical means, is the same device, and a claim in a patent for one such device claims and secures the other. — Lourie *v.* Lenhart, 130 Fed. 122; 64 C. C. A. 456.

Machine Co. *v.* Murphy, 97 U. S. 120.

An equivalent is defined as a thing which performs the same function, and performs that function in substantially the same manner, as the thing of which it is alleged to be an equivalent. But in the application of rules on the subject we must have in view the patent alleged to be infringed. If it is for a primary invention — one which performs a function never performed by an earlier invention — the patentee will have the right to treat as infringers those who make or use machines operating on the same principle and performing the same functions by analogous or equivalent combinations, even though the infringing machine may be an improvement of the original. But if the invention is a secondary invention, that is, one which performs a function previously performed by earlier inventions, but which performs that function in a substantially different way from any which preceded it; an improvement on a known machine by a mere change of form or a new combination of parts, the patentee cannot treat another as an infringer who has improved the original machine by the use of a different form or combination performing the same functions. The first inventor of improvements cannot invoke the doctrine of equivalents and suppress all other improvements. — Central *v.* Coughlin, 141 Fed. 91; 72 C. C. A. 93.

A mechanical equivalent which may be substituted for an omitted mechanical element in a combination claim is one that performs the same function by applying the same course to the same object through the same means and mode of application. — Hardison *v.* Brinkman, 156 Fed. 962; 87 C. C. A. 8.

§ 374. Combinations.

A combination is substantially different from that patented when the substitute for the ingredient left out to perform the same function was not known as a proper substitute therefor when the invention was patented. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

Old ingredients known at the date of the letters patent granted for an invention, consisting of a combination of old ingredients, if also known at that date as a proper substitute for one or more of the ingredients of the invention secured by the letters patent, are the equivalents of the corresponding ingredients of the patented combination. Such old ingredients so known at the date of the letters patent granted, are the equivalents of the ingredients of the patented combination, and no others, and it may be added that that and that only, is what is meant by the rule that inventors of a new combination of old ingredients are as much entitled to claim equivalents as any other class of inventors. — Gill *v.* Wells, 89 U. S. 1; 22 L. Ed. 699.

Gould *v.* Rees, 15 Wall. 194.

A party who merely substitutes another old ingredient for one of the ingredients of a combination is an infringer, if the substitute performs the same function as the ingredient for which it was substituted, and was well known at the date of the patent as a proper substitute for the omitted ingredient; but the rule is otherwise if the ingredient substituted was a new one or performed substantially a different function, or was not known at the date of the plaintiff's patent as a proper substitute for the one omitted, as in that event he does not infringe. — Gill *v.* Wells, 89 U. S. 1; 22 L. Ed. 699.

Roberts *v.* Harnden, 2 Cliff. 504.

By an equivalent in such a case is meant that the ingredient substituted for the one withdrawn performs the same function as the other, and that it was well known at the date of the patent securing the invention as a proper

substitute for the one omitted in the patented combination. — Gill *v.* Wells, 89 U. S. 1; 22 L. Ed. 699.

Gould *v.* Rees, 15 Wall. 194.

A patent for a novel combination may invoke the doctrine of equivalents. — Norton *v.* Jensen, 9 Fed. 859; 1 C. C. A. 452.

Imhauser *v.* Buerk, 101 U. S. 655; Norton *v.* Can Co. 45 Fed. 638; Carter *v.* Baker, 1 Sawy. 516; Seymour *v.* Osborne, 11 Wall. 516; Machine Co. *v.* Murphy, 97 U. S. 125; Wicke *v.* Ostrum, 103 U. S. 469.

We do not say what the result might be if the patentee makes his description of the elements of his combination broad enough to include in each or any of them any kind of mechanism adapted to produce the same result as a step in the operation. — Wells *v.* Curtis, 66 Fed. 318; 13 C. C. A. 494.

Phoenix *v.* Spiegel, 133 U. S. 360.

"Mechanical equivalents" as the phrase is to be understood in this connection, are such devices as were known previously, and which, in the particular combinations of devices specified as constituting the patented invention, can be adapted to perform the functions of those specified devices for which they are employed as substitutes without changing the inventor's idea of means. In other words, without introducing an original idea, producing, as the result of it, an improvement which is itself a patentable invention. — Jensen *v.* Norton, 67 Fed. 236; 14 C. C. A. 383.

Rob. Pat. 248, 253, 254.

And here it may be remarked in applying the doctrine of equivalents, a distinction is made between inventions of specific devices and inventions of combinations. In a simple invention the range of equivalents is much wider than in a combination. In the former a change which would be held to be a substitution of equivalents may in the latter be considered to be an introduction of a new idea of means. Therefore it is said, with reference to such elements in any combination as constitute its subordinate means, no other element can be equivalent unless they are equivalent inventions; that is, unless they not merely perform the same functions, but perform them by applying the same force to the same object through the same mode of application. It is only when an invention is broad and primary in its character, and the mechanical functions performed by the machine are, as a whole, entirely new that the courts are disposed to make the range of equivalents correspondingly broad. — Erie *v.* American, 70 Fed. 58; 16 C. C. A. 632.

1 Rob. Pat. 254; Wells *v.* Curtis, 66 Fed. 318; Miller *v.* Mfg. Co. 151 U. S. 207.

The doctrine of mechanical equivalents is governed by the same rules and has the same application when the infringement of a patent for a combination is in question as when the issue is over an infringement of a patent for any other invention. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

Schroeder *v.* Brammer, 98 Fed. 880; Imhauser *v.* Buerk, 101 U. S. 647; Griswold *v.* Harker, 62 Fed. 389; Thomson *v.* Bank, 53 Fed. 250; Seymour *v.* Osborne. 11 Wall. 516; Gould *v.* Rees, 15 Wall. 187; Fay *v.* Cordesman, 109 U. S. 408; Water-Meter Co. *v.* Desper, 101 U. S. 332; Gage *v.* Herring, 107 U. S. 640; Machine Co. *v.* Murphy, 97 U. S. 120; National *v.* American, 53 Fed. 367; Belding *v.* Challenge, 152 U. S. 100.

The doctrine of mechanical equivalents is governed by the same rules and has the same application when the infringement of a patent for a com-

bination is in question as when the issue is over the infringement of a patent for any other invention. — Brammer *v.* Schroeder, 106 Fed. 918; 46 C. C. A. 41.

Imhauser *v.* Buerk, 101 U. S. 647; Griswold *v.* Harker, 62 Fed. 389; Thomson *v.* Bank, 53 Fed. 250; Seymour *v.* Osborne, 11 Wall. 516; Gould *v.* Rees, 15 Wall. 187; Fay *v.* Cordesman, 109 U. S. 408; Water-Meter Co. *v.* Desper, 101 U. S. 332; Gage *v.* Herring, 107 U. S. 640; Machine Co. *v.* Murphy, 97 U. S. 120; National *v.* American, 53 Fed. 367; Belding *v.* Challenge, 152 U. S. 100.

The learned judge who decided the case below had no doubt "that the defendant's straps and buckles are an equivalent of the complainant's cords and hooks," and in this we agree with him; but he held that the complainants were not entitled to invoke the doctrine of equivalency, and this ruling we think was erroneous. By the changes in phraseology which were made pending the application, nothing can fairly be said to have surrendered or disallowed that which the third claim as finally approved plainly indicated. That claim, as broadly expressed, is for "lacing devices;" and it is not to be implied that either the Patent Office on the one side or the applicant on the other contemplated any limitation of it which would admit of its evasion by means so palpably colorable as the substitution of straps for cords and buckles for hooks. In no case is a patentee to be denied protection commensurate with the scope of his actual and distinctly described and claimed invention by excluding him from the benefit of the doctrine of equivalents. That doctrine should have been applied; for it is plainly obvious that the departures made by the defendant are merely formal, "and of such character as to suggest that they are studied evasions of those described in the claim in issue." — Lepper *v.* Randall, 113 Fed. 627; 51 C. C. A. 337.

Hillborn *v.* Mfg. Co., 69 Fed. 958; Societe *v.* Rehfuss, 75 Fed. 657; Bundy *v.* Detroit, 94 Fed. 524; Boston *v.* Bemis, 80 Fed. 287.

The range of equivalents covered by the patent corresponds with the character of the invention, and includes all forms which embody the substance of the invention, and by like mechanical co-operation effect substantially the same result. — Dowagiac *v.* Brennan, 127 Fed. 143; 62 C. C. A. 257.

In a combination patent for an improvement in the arrangement or adaptation of old elements, the inventor is not entitled to a broad interpretation of the doctrine of mechanical equivalents, so as to cover a device not specifically included in his claims and specifications. — Hardison *v.* Brinkman, 156 Fed. 962; 87 C. C. A. 8.

Miller *v.* Eagle, 151 U. S. 186.

§ 375. Generic Inventions.

If the patentee be the original inventor of a device or machine, he will have the right to treat as infringers all who make devices operating on the same principle, and performing the same functions by analogous means or equivalent combinations, even though the infringing machine may be an improvement of the original and patentable as such. — McCormick *v.* Talcott, 61 U. S. 402; 15 L. Ed. 930.

The combination of the first claim of the patent being new, and, consequently never having been applied in such a combination, the complainant is entitled to the doctrine of equivalents as applied to the combination. — Clough *v.* Gilbert, 106 U. S. 166; 27 L. Ed. 138; 1 S. Ct. 198.

If the state of the art was such as to entitle the patentee to a broad claim for any device for performing the function by such or similar means, the defendants would infringe. — Newton *v.* Furst, 119 U. S. 373; 30 L. Ed. 442; 7 S. Ct. 369.

Where an invention is one of a primary character, and the mechanical functions performed by the machine are, as a whole, entirely new, all subsequent machines which employ substantially the same means to accomplish the same result are infringements, although the subsequent machine may contain improvements in the separate mechanisms which go to make up the machine. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

McCormick *v.* Talcott, 61 U. S. 402; Chicago *v.* Sayles, 97 U. S. 554; Clough *v.* Barker, 106 U. S. 166; Duff *v.* Sterling, 107 U. S. 636; Consolidated *v.* Crosby, 113 U. S. 157; Tilghman *v.* Proctor, 102 U. S. 707; Nelson *v.* Hartford, 1 Web. P. C. 295.

Where an inventor has combined for the first time one organization of mechanism for performing all the several steps of an entire machine process, his invention is infringed by another employing three sets of mechanism in combination, provided each mechanism individually considered is a proper equivalent for the corresponding mechanism of the former patent, and the fact that the mechanism is more simple makes no difference. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

In the case of a pioneer patent, where the specification has described or indicated an alternative construction, the claims will be construed to include such alternative construction. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

It is well settled that a greater degree of liberality and a wider range of equivalents are permitted where the patent is of a pioneer character than when the invention is simply an improvement, may be the last and successful step, in the art theretofore partially developed by other inventors in the same field. — Cimiotti *v.* American, 198 U. S. 399; 49 L. Ed. 1100; 25 S. Ct. 697.

Westinghouse *v.* Boyden, 170 U. S. 537; Singer *v.* Cramer, 192 U. S. 265.

General application of doctrine and full discussion of the cases in Reece *v.* Globe, 61 Fed. 958; 10 C. C. A. 194.

Morley *v.* Lancaster, 129 U. S. 263; Mfg. Co. *v.* Adams, 151 U. S. 139; Miller *v.* Mfg. Co. 151 U. S. 186; Union *v.* U. S. 112 U. S. 624; Brooks *v.* Fisk, 15 How. 212; Klein *v.* Russell, 19 Wall. 433; Vulcanite *v.* Davis, 102 U. S. 222; Béné *v.* Jeantet, 129 U. S. 683; Gordon *v.* Warder, 150 U. S. 47; Keystone *v.* Phoenix, 95 U. S. 274; Fay *v.* Cordesman, 109 U. S. 408; Mfg. Co. *v.* Sargent, 117 U. S. 373; Dryfoos *v.* Wiese, 124 U. S. 32; Burns *v.* Meyer, 100 U. S. 671; Huber *v.* Mfg. Co. 148 U. S. 270; Brown *v.* Mfg. Co. 57 Fed. 731; Winans *v.* Denmead, 15 How. 330; Sewall *v.* Jones, 91 U. S. 171; Eddy *v.* Dennis, 95 U. S. 560; Werner *v.* King, 96 U. S. 218; Electric *v.* LaRue, 139 U. S. 601; Hoyt *v.* Horne, 145 U. S. 302; Lehigh *v.* Mellon, 104 U. S. 112.

The question of infringement is controlled by the principles restated in Machine Co. *v.* Lancaster, 129 U. S. 263, and confirmed in subsequent and recent cases (Miller *v.* Mfg. Co. 151 U. S. 186) and which makes these actual differences, which would be important in a subordinate patent, unessential when a patent for a pioneer invention is under examination. If such differences should be regarded by courts as essential, when the claims do not make

the specific devices essential, patents for pioneer inventions would ordinarily have but little value. — Westinghouse *v.* N. Y. 63 Fed. 962; 11 C. C. A. 528.

If the invention had been of a time recorder, as a new thing containing these parts, the claims might cover all modes of so bringing the impression platen into operation, but as it was, they can cover only substantially these means. - – Bundy *v.* Columbian, 64 Fed. 851; 12 C. C. A. 442.

In view of prior inventions he cannot be deemed a "pioneer in the art," and therefore cannot invoke the doctrine of equivalents, as the courts apply that doctrine to primary inventions, so as to include all forms of devices which operate to perform the same functions or accomplish the same result. — Wells *v.* Curtis, 66 Fed. 318; 13 C. C. A. 494.

Miller *v.* Mfg. Co. 151 U. S. 186.

Whether he specifically claims in his patent the benefit of equivalents or not, the law allows them to him according to the nature of his patent. If it is a mere improvement on a successful machine, a mere tributary invention, or a device the novelty of which is confined by the past art to the particular form shown, the range of equivalents is narrowly restricted. If it is a pioneer patent with a new result, the range is very wide, and is not restricted by the failure of the patentee to describe and claim combinations of equivalents. Nothing will restrict the pioneer patentee's rights in this regard save the use of language in his specifications and claims which permits no other reasonable construction than one attributing to the patentee a positive intention to limit the scope of his invention in some particular to the exact form of the device he shows, and a consequent willingness to abandon to the public any other form, should it be adopted and prove useful. — McCormick *v.* Aultman, 69 Fed. 371; 16 C. C. A. 259.

Distinguishing, Keystone *v.* Phoenix, 95 U. S. 274; Brown *v.* Mfg. Co. 57 Fed. 731.

Winans *v.* Denmead, 15 How. 330; Vulcanite *v.* Davis, 102 U. S. 222; Reece *v.* Globe, 61 Fed. 958; Mfg. Co. *v.* Adams, 151 U. S. 139; Miller *v.* Mfg. Co. 151 U. S. 186.

Claim 1 of the patent in suit is a very broad one, and, as we held it valid, it would seem that no method of making the connection between the actuating jacks and the crank shaft, by means well known in the arts at the date of the patent, would evade it. — Bresnahan *v.* Tripp, 72 Fed. 920; 19 C. C. A. 237.

The pioneer inventor is entitled to a generic claim, under which will be included every species included within the genus. In addition to such generic claim, he may include in the same application, specific claims for one or more of the species. — Von Schmidt *v.* Bowers, 80 Fed. 121; 25 C. C. A. 323.

Machine Co. *v.* Lancaster, 129 U. S. 263; Clough *v.* Barker, 106 U. S. 166; Clough *v.* Mfg. Co. 106 U. S. 178; Rob. Pat. sec. 535; Hammerschley *v.* Scamoni, 7 Fed. 584; Telephone *v.* Spencer, 8 Fed. 509; Machine Co. *v.* Teague, 15 Fed. 390; Mfg. Co. *v.* Buffalo, 20 Fed. 126; Brush *v.* Electric, 52 Fed. 945; Ex parte Nagle, 1870 Com. Dec. 137; Ex parte Howland, 12 O. G. 889.

An original inventor, a pioneer in the art, he who evolves the original idea and brings it to some successful, useful, and tangible result, is, by the law of patents, entitled to a broad and liberal construction of his claim; whereas an improver is only entitled, and justly so, to what he claims and nothing more. — Norton *v.* Jensen, 90 Fed. 415; 33 C. C. A. 141.

Note: The first half of this statement is good law; the latter half is not.

The right of an improver to equivalents is commensurate with the extent of his invention.

The McCarty patent, being found at the head of a class, though in a well developed art, is entitled to a liberal range of equivalency. — Lamson *v.* Hillman, 123 Fed. 416; 59 C. C. A. 510.

Consolidated *v.* Crosby, 113 U. S. 157; Morley *v.* Lancaster, 129 U. S. 263; National *v.* Interchangeable, 106 Fed. 693; Crown *v.* Aluminum, 108 Fed. 845.

§ 376. Improvements.

An inventor is not entitled, where his invention covers a particular machine for performing a given function, to claim equivalency in any machine which performs the same function. — Eryfoos *v.* Wiese, 124 U. S. 32; 31 L. Ed. 362; 8 S. Ct. 354.

Where the margin of invention is very narrow, the doctrine of equivalents cannot be invoked to make out infringement. — Doze *v.* Smith, 69 Fed. 1002; 16 C. C. A. 581.

A patent to the original inventor of a machine or construction, which first performs a useful function, protects him against all machines and constructions that perform the same function by equivalent mechanical devices. But a patent to one who has simply made a slight improvement on devices that perform the same function before as after the improvement is protected against those only which use the very improvement he describes and claims, or mere colorable evasions of it. — Murphy *v.* Excelsior, 76 Fed. 965; 22 C. C. A. 658.

McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Mfg. Co. 61 Fed. 980.

A mere improvement of a narrow character upon well-known devices for accomplishing the same purpose is not entitled to a liberal application of the doctrine of equivalents. — Muller *v.* Lodge, 77 Fed. 621; 23 C. C. A. 357.

Miller *v.* Mfg. Co. 151 U. S. 186; Wright *v.* Yuengling, 155 U. S. 47.

A broad claim, such as is now insisted upon, would make his claim void for anticipation. In view of the history of devices intended to perform the same function, his patent can only be saved by confining him to the specific form he has described and claimed. — Jeffrey *v.* Independent, 83 Fed. 191; 27 C. C. A. 512.

Knapp *v.* Morss, 150 U. S. 221; Miller *v.* Mfg. Co. 151 U. S. 186; Wells *v.* Curtis, 66 Fed. 318; Ney *v.* Mfg. Co. 69 Fed. 405.

This invention is in no sense one of a primary character, and complainant upon this ground is not entitled to that range of equivalents accorded to such an invention. — St. Louis *v.* National, 87 Fed. 885; 31 C. C. A. 265.

McCormick *v.* Talcott. 20 How. 402; Miller *v.* Mfg. Co. 151 U. S. 207; Bragg *v.* Fitch, 121 U. S. 478; Wells *v.* Curtis, 66 Fed. 318.

If his invention is one which has marked a decided step in the art, and has proven of value to the public, he will be entitled to the benefit of the rule of equivalents, though not in so liberal a degree as if his invention was of a primary character. — Bundy *v.* Detroit, 94 Fed. 524; 36 C. C. A. 375.

Miller *v.* Mfg. Co. 151 U. S. 186.

A patent to the original inventor of a machine which first performs a useful function protects him against all mechanisms that perform the same

function by equivalent mechanical devices, but a patent to one who simply made a slight improvement on a device that performed the same function before as after the improvement is protected only against those who use the very improvement that he describes and claims, or mere colorable evasions of it. — M'Bride *v.* Kingman, 97 Fed. 217; 38 C. C. A. 123.

Stirrat *v.* Mfg. Co., 61 Fed. 980; Murphy *v.* Excelsior, 76 Fed. 965; Adams *v.* Lindell, 77 Fed. 432.

He is not entitled to a monopoly of analogous means found in the old art. Subsequent improvers are equally free to accomplish the same general results by different means, if not purely colorable changes. The range of equivalents allowed to the combination must be so narrowed as to include nothing which is not substantially identical with the means employed. — Noonan *v.* Chester, 99 Fed. 90; 39 C. C. A. 426.

Knapp *v.* Morss, 150 U. S. 221; Wright *v.* Clinton, 67 Fed. 790; Wells *v.* Curtis, 66 Fed. 318.

The form he describes and claims is not of the essence of his invention, and the law allows a patentee any form which is the equivalent of that claim, unless he has expressly limited himself to the one claim he describes, or unless it is necessary to limit him to the specific form in order to save his patent from anticipation. Hoyt was not a pioneer. But his invention is purely a meritorious one. In such case he is not cut off from a reasonable range of equivalents measured by the advance he has made over older machines. — McSherry *v.* Dowagiac, 101 Fed. 716; 41 C. C. A. 627.

Bundy *v.* Detroit, 94 Fed. 524; Penfield *v.* Chambers, 92 Fed. 639; McCormick *v.* Aultman, 69 Fed. 371; Muller *v.* Tool Co. 77 Fed. 621.

That in the case of a narrow improvement, an attempt to invoke the doctrine of equivalents to make out infringement may result in defeating the claim of the patent, see Hobbs *v.* Gooding, 111 Fed. 403; 49 C. C. A. 414.

Hoyt, it is true, was not a pioneer; but his invention being meritorious, he is not cut off from a reasonable range of equivalents, measured by the advance he has made over older machines. — Dowagiac *v.* Minnesota, 118 Fed. 136; 55 C. C. A. 86.

Bundy *v.* Detroit, 94 Fed. 524; McSherry *v.* Dowagiac, 101 Fed. 716; Penfield *v.* Chambers, 92 Fed. 639; McCormick *v.* Aultman, 69 Fed. 371; Muller *v.* Tool Co. 77 Fed. 621.

The appellant's invention being obviously not a pioneer, but only an improvement upon the prior art, its claims cannot be given a liberal interpretation; but there is yet a right to a reasonable range of equivalents, measured by the character and extent of the improvement, and infringement cannot be avoided by mere colorable modifications of some of the elements, not essentially varying its principle or mode of operation. — Heekin *v.* Baker, 138 Fed. 63; 70 C. C. A. 559.

National *v.* Interchangeable, 106 Fed. 693; Dowagiac *v.* Minnesota, 118 Fed. 136; Standard *v.* Caster, 113 Fed. 162.

§ 377. Known Elements.

Repeated decisions of this court have settled the rule in such cases that if the ingredient substituted by the defendant for the one left out in the defendant's machine was a newly discovered one, or even an old one performing some new function, and was not known at the date of the plaintiff's patent as a proper substitute for the ingredient left out, the charge of infringement cannot be maintained. — Gill *v.* Wells, 89 U. S. 1; 22 L. Ed. 699.

Seymour *v.* Osborne, 11 Wall. 555; Vance *v.* Campbell, 1 Black, 428; Prouty *v.* Ruggles, 16 Pet. 341.

One point which may be considered in determining equivalents is the age of the two devices, or whether the alleged infringement was known and in force at the time of the granting of complainants' patent; the presumption being in such case that it was used as an equivalent, only to avoid the charge of infringement, and not as an improvement. — Jones *v.* Munger, 49 Fed. 61; 1 C. C. A. 158.

Refinery *v.* Matthiesson, 2 Fish. P. C. 629; O'Reilly *v.* Morse, 15 How. 123; Robertson *v.* Blake, 94 U. S. 732.

Other constructions may now appear to be equivalents, but they were not known to be such when the appellee's patent was issued, and the patentee did not mention them as such in his specifications. The doctrine of equivalents, therefore, does not aid the appellee. — Brown *v.* Stilwell, 57 Fed. 731; 6 C. C. A. 528.

Rowell *v.* Lindsay, 113 U. S. 97; Keystone *v.* Phoenix, 95 U. S. 274; Harris *v.* Allen, 15 Fed. 106; Mfg. Co. *v.* Rosenstock, 30 Fed. 67; Smith *v.* Putnam, 45 Fed. 202; Otley *v.* Walkins, 36 Fed. 323; Burns *v.* Meyer, 100 U. S. 671; Klein *v.* Russell, 19 Wall. 433.

The means by which this or any other result or function is accomplished may be many and various, and, if those several means are not mechanical equivalents, each of them is patentable. — Boyden *v.* Westinghouse, 70 Fed. 816; 17 C. C. A. 430.

A patent covers only known equivalents. — Magic *v.* Economy, 97 Fed. 87; 38 C. C. A. 56.

An attempt is made to escape from this conclusion under the rule that, if the element substituted for the one withdrawn has been discovered since the date of the patent, it cannot be said to be its mechanical equivalent. Gould *v.* Rees, 15 Wall. 187. But it is too plain for argument or serious consideration that there was neither discovery nor invention in perceiving and applying to the device of complainant the fact that an infusible metal secured by wax or other fusible material was the mechanical equivalent of, performed the same function and worked the same result as, the fusible plug of White, and could be effectually used as its substitute. The shot and the wax were not, therefore, newly discovered elements, but constituted a mere mechanical substitute for the element which White described and claimed. — Kinloch *v.* Western, 113 Fed. 652; 51 C. C. A. 369.

§ 378. Range of.

A patentee, entitled to invoke the doctrine of equivalents is entitled so to do whether he has claimed such in his specification or not. — Goodyear *v.* Davis, 102 U. S. 222; 26 L. Ed. 149.

Depends upon the extent and nature of the invention. — Miller *v.* Eagle, 151 U. S. 186; 38 L. Ed. 121; 14 S. Ct. 310.

Morley *v.* Lancaster, 129 U. S. 263.

It is manifest, therefore, that it was not meant to decide that only pioneer patents are entitled to invoke the doctrine of equivalents, but that it was decided that the range of equivalents depends upon and varies with the

degree of invention. — Continental *v.* Eastern, 210 U. S. 405; 51 L. Ed. 922; 28 S. Ct. 748.

Cimiotti *v.* American, 198 U. S. 399; Kokomo *v.* Kitselman, 189 U. S. 8; Miller *v.* Eagle, 158 U. S. 186; Ives *v.* Hamilton, 92 U. S. 426; Hoyt *v.* Horne, 145 U. S. 302; Deering *v.* Winona, 155 U. S. 286; Walk. Pat. sec. 362; Rob. Pat. sec. 258.

The range of equivalents depends upon the extent and nature of the invention. If the invention is broad or primary in its character, the range of equivalents will be correspondingly broad, under the liberal construction which the courts give to such inventions. — Roemer *v.* Peddie, 78 Fed. 117; 24 C. C. A. 39.

Machine Co. *v.* Lancaster, 129 U. S. 263; Miller *v.* Mfg. Co. 151 U. S. 207.

We have discussed this general question so fully in Long *v.* Mfg. Co. 75 Fed. 835, and Reece *v.* Globe, 61 Fed. 958 (an extreme case in one way) and in Ball *v.* Ball, 58 Fed. 818 (an extreme case the other way) that we do not deem it necessary to go over it here. The case at bar lies between the two cases last cited; and it clearly is not shut out from the expression of the Supreme Court cited by us in Reece *v.* Globe at page 962, that "the range of equivalents depends upon the extent and nature of the invention." — Boston *v.* Bemis, 80 Fed. 287; 25 C. C. A. 420.

While it is clear that a patentee is ordinarily entitled to all the uses and all the advantages which his invention develepes so far as the new application does not involve additional invention, yet a function not known when the patent issues, and afterwards developed, cannot ordinarily be used to broaden the construction of a claim. — Heap *v.* Tremont, 82 Fed. 449; 27 C. C. A. 316.

Reece Globe, 61 Fed. 958; Wright *v.* Clinton, 67 Fed. 790; Long *v.* Mfg. Co. 75 Fed. 835; Boston *v.* Bemis, 80 Fed. 287.

The range of equivalents depends upon the extent and nature of the invention. — Beach *v.* Hobbs, 92 Fed. 146; 34 C. C. A. 248.

Miller *v.* Mfg. Co. 151 U. S. 186.

The more meritorious the invention, the greater the step in the art, the less the suggestion of the improvement in the prior art, the more liberal are the courts in applying in favor of the patentee the doctrine of equivalents. The narrower the line between the faculty exercised in inventing a device and mechanical skill, the stricter are the courts in rejecting the claim of equivalents by the patentee in respect to alleged infringements. — Penfield *v.* Chambers, 92 Fed. 630; 34 C. C. A. 579.

A patentee who is the original inventor of a device or machine — a pioneer in the art — is entitled to a broad and liberal construction of his claims; but an inventor who only claims to be an improver, is only entitled to what he claims, and nothing more. — Overweight *v.* Improved, 94 Fed. 155; 36 C. C. A. 125.

McCormick *v.* Talcott, 20 How. 402; Norton *v.* Jensen, 90 Fed. 415.

Note: The last clause of the above statement of the general rule attempted to be stated, is unqualifiedly bad law. It is not the law, and never has been the law, that an improver is entitled only to exactly what he claims. The rule is and always has been, that an improver is entitled to a range of equivalency commensurate with the extent of his invention.

This court, following the supreme court, has pointed out in a number of cases that, the more meritorious the patent, the more liberal will the court be in applying the doctrine of equivalents to cover devices adopted for the purpose of appropriating all that is good in a patent without rendering the tribute which the patent law was intended to secure, for a temporary period, to those who by their ingenuity have made possible real progress in the industrial arts. — King *v.* Hubbard, 97 Fed. 795; 38 C. C. A. 423.

Bundy *v.* Detroit, 94 Fed. 524; McCormick *v.* Aultman, 69 Fed. 371; Wells *v.* Curtis, 66 Fed. 318; Miller *v.* Mfg. Co. 151 U. S. 186.

One who merely makes and secures a patent for a slight improvement on an old device or combination, which performs the same function before as after the improvement, is protected against those only who use the very device or improvement he describes or mere colorable evasions thereof. In other words, the term "mechanical equivalent," when applied to the interpretation of a pioneer patent, has a broad and generous signification, while its meaning is very narrow and limited when it conditions the construction of a patent for a slight and almost immaterial improvement. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

Adams *v.* Lindell Co., 77 Fed. 432; Stirrat *v.* Mfg. Co., 61 Fed. 980; McCormick *v.* Talcott, 20 How. 402; R. R. Co. *v.* Sayles, 97 U. S. 554; Brill *v.* Car Co., 90 Fed. 666.

The doctrine of mechanical equivalents conditions the construction of all these patents, and in determining questions concerning them the breadth of the signification of the term is proportioned in each case to the character of the advance or invention evidenced by the patent under consideration, and is so interpreted by the courts as to protect the inventor against piracy and the public against unauthorized monopoly. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

Schroeder *v.* Brammer, 98 Fed. 880; McSherry *v.* Dowagiac, 101 Fed. 716; Bundy *v.* Detroit, 94 Fed. 524; Miller *v.* Mfg. Co., 151 U. S. 186; Penfield *v.* Chambers, 92 Fed. 639; McCormick *v.* Aultman, 69 Fed. 371; Muller *v.* Tool Co., 77 Fed. 621.

As we have several times had occasion to say, and what is indeed well established patent law, the term "equivalent" has a variable meaning, and is measured by the character of the invention to which it is applied. — Rich *v.* Baldwin, 133 Fed. 920; 66 C. C. A. 464.

McCormick *v.* Aultman, 69 Fed. 371; Penfield *v.* Chambers, 92 Fed. 630; McSherry *v.* Dowagiac, 101 Fed. 716.

The term "mechanical equivalent" has a broad and generous signification in the interpretation of a pioneer patent, a very narrow and restricted one in the construction of a patent for a slight improvement, and, in the interpretation of patents for the great mass of inventions between these extremes, its meaning is always proportioned to the character of the advance or invention under consideration. — Mallon *v.* Gregg, 137 Fed. 68; 69 C. C. A. 48.

National *v.* Interchangeable, 106 Fed. 693.

In a combination device consisting of congeries of well-known mechanical appliances, no liberality of construction is accorded to it to create a monopoly; but is limited to the descriptive elements in the combination as expressed in the specifications; and no great liberality of the doctrine of mechanical equivalents can be indulged in in its favor. As the applicant for such combination of old devices chooses his own expressions in presenting it, and

is required to enumerate the elements of his claim, he is limited to the combined apparatus as specified. And no one is an infringer of a combination claim unless he uses the elements thereof, and in substantially the same mode of co-operation. — Portland *v.* Hermann, 160 Fed. 91; 87 C. C. A. 247.

Cimiotti *v.* American, 198 U. S. 399.

General rule restated without change and cases cited in Union *v.* Diamond, 162 Fed. 148; 89 C. C. A. 172.

That where the improvement is a narrow one, it is not entitled to a range of equivalents of any extent, and to save the patent where the alleged infringement is not an identical act, it must be held not infringed, see Hendey *v.* Prentice, 162 Fed. 481; 89 C. C. A. 401.

U. S. Hog *v.* North, 158 Fed. 818.

We are dealing, not with a great invention, but with a meritorious one which has made a distinct advance in the art in question. We think the claim should be given an interpretation liberal enough to protect the inventor from the use of machines which differ only in nonessential changes which any skilled mechanic would know enough to make. — Benbow-Brammer *v.* Straus, 166 Fed. 114; C. C. A.

§ 379. Identity.

The ends attained being the same, the question is whether the means employed are identical or equivalent. — Ives *v.* Hamilton, 92 U. S. 426; 23 L. Ed. 494.

Authorities concur that the substantial equivalent of a thing, in the sense of the Patent Law, is the same as the thing itself; so that if two devices do the same work in substantially the same way and accomplish substantially the same result, they are the same, even though they differ in name, form or shape. — Union *v.* Murphy, 97 U. S. 120; 24 L. Ed. 935.

Curt. Pat. sec. 310.

Though some of the corresponding parts of the machinery are not the same, and, separately considered, could not be regarded as identical or conflicting, yet, having the same purpose in the combination, and effecting that purpose in substantially the same manner, they are equivalents of each other in that regard. — National *v.* American, 53 Fed. 367; 3 C. C. A. 559.

Cochrane *v.* Deener, 94 U. S. 780,

While the patentee is entitled to the unknown beneficial uses to which his invention may be put, he cannot prevent the use of ingredients in the combination which may accomplish the previously unknown result, but not equivalents of the patented ingredient in the performance of the function which is specified and described in the claim. — Johns Mfg. Co. *v.* Robertson, 77 Fed. 985; 23 C. C. A. 601.

Roberts *v.* Ryer, 91 U. S. 150; Wells *v.* Jacques, 5 O. G. 364; Rowell *v.* Lindsay, 113 U. S. 97.

§ 380. Miscellaneous Rulings.

Every device which is used to produce the same effect is not the equivalent for another. — Burr *v.* Duryee, 68 U. S. 531; 17 L. Ed. 750.

McCormick *v.* Talcott, 20 How. 405.

It is true the patent cannot be extended beyond the claim. That bounds the patentee's right. But the claim in this case covers the whole process invented, and the complainants seek no enlargement of the process. Certainly the claim of the process ought not to be regarded as excluding all other substances than the one mentioned. As already noticed, the specification avows the object of the invention. The subject to be treated is fibrous materials of a vegetable nature. And it may well be doubted, in view of this general declaration of the object, whether there is anything that limits the scope of the invention to a process of treating straw and other like materials. — American *v.* Fiber, 90 U. S. 566; 23 L. Ed. 31.

In machines, when a broken line serves the same purpose as a curved line the one is the equivalent of the other. — Ives *v.* Hamilton, 92 U. S. 426; 23 L. Ed. 494.

The use of a pressure bar in the place of a pressure roll, and the use of springs in the place of weights to produce the pressure are equivalents. — Woodbury *v.* Keith, 101 U. S. 479; 25 L. Ed. 939.

But the lever or its equivalent as a mechanical instrument is made an essential element, and dispensing with the lever and using instead the human hand is not the use of an equivalent, although in the plaintiff's machine the hand is applied to move the lever. — Brown *v.* Davis, 116 U. S. 237; 29 L. Ed. 659; 6 S. Ct. 379.

Water *v.* Desper, 101 U. S. 332; Gage *v.* Herring, 107 U. S. 640; Fay *v.* Cordesman, 109 U. S. 408; Sargent *v.* Hall, 114 U. S. 63.

As that used by the defendants differs from that described in the patent, just as that employed by the prior patentee does, the process of the defendants cannot be construed as an infringement without at the same time declaring that used by the prior patentee to be an anticipation. — Plummer *v.* Sargent, 120 U. S. 442; 30 L. Ed. 737; 7 S. Ct. 640.

This result being different from that in the plaintiff's device, the mechanism is different and is not an equivalent of Button's. The fourth claim of the patent, if valid, cannot be construed so as to cover the defendant's apparatus. — Grier *v.* Wilt, 120 U. S. 412; 30 L. Ed. 712; 7 S. Ct. 718.

Where the claims covered specifically cylinders with chambers or depressions, they cannot be construed to cover plain cylinders. — Hendy *v.* Golden, 127 U. S. 370; 32 L. Ed. 207; 8 S. Ct. 1275.

Fay *v.* Cordesman, 109 U. S. 408; Sargent *v.* Hall, 114 U. S. 63; Shepard *v.* Carrigan, 116 U. S. 593; White *v.* Dunbar, 119 U. S. 47; Crawford *v.* Heysinger, 123 U. S. 589.

There is no invention in substituting one valve or spring of a familiar shape for another. — Westinghouse *v.* Boyden, 170 U. S. 537; 42 L. Ed. 1136; 18 S. Ct. 707.

Imhauser *v.* Buerk, 101 U. S. 647.

Generally, a patentee, no matter what the character of his patent may be, can claim mechanical equivalents known to exist at the time of the application, whether he claims them or not in his application. — Hunt Bros. *v.* Cassidy, 53 Fed. 257; 3 C. C. A. 525.

Walk. Pat. sec. 250; Goodyear *v.* Davis, 102 U. S. 230; Tatum *v.* Gregory, 41 Fed. 142.

The substitution of a weight to perform the same function as a spring, is an equivalent mechanism. — American *v.* Weston, 59 Fed. 147; 8 C. C. A. 56.

There can be no question that a spring rocker is a perfectly familiar way of obtaining a tipping or oscillating motion, as well as a pivot or hinge, and that one is a well known equivalent of the other. — M'Kay *v.* Dizer, 61 Fed. 102; 9 C. C. A. 382.

We think these claims and specifications (especially in view of the state of the art) constitute a fair disclaimer and dedication to the public of all right on the part of the patentee to protection against any such device as that used by the appellee. — Stirratt *v.* Excelsior, 61 Fed. 980; 10 C. C. A. 216.

Keystone *v.* Phoenix, 95 U. S. 274; Miller *v.* Brass Co., 104 U. S. 350; McClain *v.* Ortmayer, 141 U. S. 414; Dobson *v.* Cubley, 149 U. S. 117; Heine *v.* Smith, 43 Fed. 786; Maddock *v.* Coxon, 45 Fed. 578.

If the complainant were entitled to have his first claim construed broadly, clearly the defendant's device would be an infringement. But the complainant's invention being limited, as we have seen, by the prior state of the art, if not by the express words of his application, to the use of a single casting, the conclusion necessarily follows that the defendant has not infringed this claim of the patent. — Vulcan *v.* Smith, 62 Fed. 444; 10 C. C. A. 493.

Roemer *v.* Peddie, 132 U. S. 313; Snow *v.* Railway, 121 U. S. 617; Hoff *v.* Mfg. Co. 139 U. S. 326; Derby *v.* Thompson, 146 U. S. 476.

Means must necessarily be shown in the specification, but the identical means or the special devices were not, in the language of Machine Co. *v.* Lancaster, 129 U. S. 263, " necessary constituents " of the invention either in the specification or in the claim. — Westinghouse *v.* N. Y. 63 Fed. 962; 11 C. C. A. 528.

The distinction suggested by the circuit court between inventions employing cranks and levers visible to the senses and those employing compressed air, which operates by modes not visible to the senses, — as to which latter devices the circuit court held that, " in judging of an infringement we are to direct our attention rather to functional equivalents than to mechanical equivalents," — we do not think well taken, even in favor of pioneer inventions. The Supreme Court in its ruling in the great leading case of O'Reilly *v.* Morse, 15 How. 62, which was one in which the far more subtle agency of electricity was under consideration, neither made nor intimated such a distinction. — Boyden *v.* Westinghouse, 70 Fed. 816; 17 C. C. A. 430.

That where the specification contains, in a basic patent, a complete description of a species, it is sufficient to include the genus to which it belongs, or the genera which might properly be included with it. — American *v.* Howland, 80 Fed. 395; 25 C. C. A. 500.

Incandescent Lamp Pat. 159 U. S. 465; Read *v.* Schultze-Berge, 78 Fed. 493; Pearl *v.* Ocean, Fed. Cas. 10876; Rob. Pat. sec. 517.

It is very usual for patentees to assert that Machine Co. *v.* Lancaster has a very general application. On the other hand, it was exceptionable, and the invention in suit there is easily distinguished from the great mass of patented combinations. Its underlying idea was novel. As was said by the Supreme Court at page 273, the mechanical function performed by the

machine covered by the patent, was as a whole entirely new. In the present suit, however, the entirely new function is found in the device of Woodward's earlier patent, and the patent now in issue shows nothing except a method of making the new function more useful. In this particular the case is essentially unlike the conditions of the hypothesis stated in U. S. *v.* Burdan, 156 U. S. 552, as it is entirely plain that the device described in the claim in issue would infringe the device of Woodward's entire patent, although an improvement on it. — Boston *v.* Woodward, 82 Fed. 97; 27 C. C. A. 69.

Machine Co. *v.* Lancaster, 129 U. S. 263.

The defendant's rotary machine has the same anvil die, and its cutters are arranged to operate in relation thereto in exactly the same way as on the reciprocating machine. They must be classed in the same category. — Diamond *v.* Goldie, 84 Fed. 972; 28 C. C. A. 589.

Oval *v.* Mfg. Co. 60 Fed. 285.

While we give full weight to the decision of the Supreme Court in Westinghouse *v.* Boyden, 170 U. S. 537, and recognize that it is an abuse of the term "equivalent" to employ it to cover every combination of devices in a machine which is used to accomplish the same result, we are of the opinion that in that case the Supreme Court left unqualified the previous rulings such as recognized in the case of Imhauser *v.* Buerk, 101 U. S. 647. — Beach *v.* Hobbs, 92 Fed. 146; 34 C. C. A. 248.

Note: I think it is a misapprehension of the holding in the Westinghouse case, to regard it as limiting the proper use of equivalents, since the question in that case turned upon the patentability of a mechanical process; and that the discussion of equivalency was largely collateral thereto.

In our opinion, neither the words "substantially as described" in the claims nor the proceedings in the patent office in which the patentee acquiesced in the decision that these words must be inserted after the word "mechanism," in the claims, prohibit the patentee from invoking the doctrine of known equivalents with respect to alleged infringers. — Beach *v.* Hobbs, 92 Fed. 146; 34 C. C. A. 248.

The meritoriousness of an improvement depends, first, upon the extent to which the former art taught or suggested the step taken; and, second, upon the advance made in the usefulness of the machine as improved. — Bundy *v.* Detroit, 94 Fed. 524; 36 C. C. A. 375.

McCormick *v.* Aultman, 69 Fed. 371.

For concrete illustrations of what are and what are not mechanical equivalents, see Brown *v.* King, 107 Fed. 498; 46 C. C. A. 432.

McKay *v.* Dizer, 61 Fed. 102; Stearns *v.* Russell, 85 Fed. 218; Foster *v.* Moore, Fed. Cas. 4978; Schreiber *v.* Grimm, 72 Fed. 671.

The mere use of known equivalents for some of the elements of prior structures; the substitution for one material of another known to possess the same qualities, though not to the same degree; the mere carrying forward or more extended application of the original idea, involving a change in form, proportions, or degree, and resulting in doing the same work in the same way and by substantially the same means — is not patentable, even though better results are secured; and this is the case, although what preceded rests alone in public knowledge and use, and not upon a patent. — Sloan *v.* Portland, 139 Fed. 23; 71 C. C. A. 460.

Market *v.* Rowley, 155 U. S. 621; Wright *v.* Yuengling, 155 U. S. 47; Adams *v.* Stamping, 141 U. S. 539 Burt *v.* Evory, 133 U. S. 349; Brown *v.* D. C., 130 U. S. 87; Crouch *v.* Roemer, 103 U. S. 797; Roberts *v.* Ryer, 91 U. S. 150; Smith *v.* Nichols, 21 Wall. 115; Hicks *v.* Kelsey, 18 Wall. 670; National *v.* Interchangeable, 106 Fed. 693; National *v.* Lithographic, 81 Fed. 395.

Note: This statement of Judge Hook, Eighth Circuit, like most general statements of the kind, is open to material criticism. While such general propositions are sound, the specific modifications essential to equity render sweeping statements more or less dangerous.

Jordan in his specifications took pains to say that he had adopted the squeezing device, which he preferred, but that the device might be varied by those skilled in the art without departing from the principle of his invention. The Eldridge patent proves that this is true. An examination of the two patents carries the conviction that Eldridge has appropriated Jordan's inventive idea. It is the whole purpose of the doctrine of equivalency to protect the inventor against piracy and secure to him the benefit of that which he has invented. — American *v.* Hickmott, 142 Fed. 141; 73 C. C. A. 359.

Where three separate elements, each performing an individual function, are supplanted by a single element which itself performs the functions of all three, it is quite clear that the three-fold capacity of the single element is not the equivalent of the three single elements. — Lambert *v.* Lidgerwood, 154 Fed. 372; 83 C. C. A. 350.

Assuming that there was an invention at all, under the prior decisions of this court, it was of that class as to which there is barely any room for equivalents. — U. S. *v.* North, 158 Fed. 818; 86 C. C. A. 78.

Ford *v.* Bancroft, 98 Fed. 309. Bradford *v.* Belknap, 105 Fed. 63. Distinguishing Reece *v.* Globe, 61 Fed. 958.

ESTOPPEL.

§ 381. Corporations.

The T. H. Co. consolidated with the Edison General. Formerly the T. H. Co. was in co-operation with the Sawyer Man Co. and was bound by various contracts involving the Sawyer Man lamp patents. This was held out to be an estoppel. — Edison Electric *v.* Sawyer-Man, 53 Fed. 592; 3 C. C. A. 605.

It has been suggested, but manifestly cannot be true, that merely because he is a stockholder in the cabinet company, the appellant may not deny the validity of a patent owned by the company. — Antisdel *v.* Chicago, 89 Fed. 308; 32 C. C. A. 216.

The old company held a mere license from the owner of the patent. The managing directors, in the absence of the owner of the patent, clearly gave the representatives of the new company to understand that the patent in

question was an asset of the old company. *Held:* Representations made by the managing directors and principal owners of the old company, even though they were more explicit than they are proved to have been, in his absence or without his certain specific knowledge, could not create an estoppel in favor of the new company as against him. — Standard *v.* Arrott, 135 Fed. 750; 68 C. C. A. 388.

§ 382. Evidence of.

It may be that questions were there involved and decided concerning other claims of the patents and other parts of steam engines in steam pumps. We do not know, and estoppels must be asserted. — Union *v.* Battle Creek, 104 Fed. 337; 43 C. C. A. 560.

Where an estoppel is relied on, the facts upon which it is based must be proved with particularity and precision, and nothing can be supplied by inference or intendment. — Standard *v.* Arrott, 135 Fed. 750; 68 C. C. A. 388

§ 383. Interference Adjudication.

In the absence of proof that defendant was in privity with the applicant whose patent was voided on interference with the patent in suit, the defendant is not estopped to deny the validity of the patent in suit. — McCarty *v.* Lehigh, 160 U. S. 110; 40 L. Ed. 358; 16 S. Ct. 240.

Russell *v.* Place, 94 U. S. 606.

We do not think that petitioner was estopped from insisting upon his application by proceeding with the interference. It would be pressing mere order of procedure and the convenience of the Patent Office too far to give them such result under the circumstances. — Steinmetz *v.* Allen, 192 U. S. 543; 48 L. Ed. 555; 24 S. Ct. 416.

So far as respects the Howe patent, and the machines made and used by the defendant thereunder, it is clear that the decisions of the patent office in favor of Howe have been acquiesced in by the complainant for such length of time as to work an abandonment of any claim to the invention therein involved. — Fassett *v.* Ewart, 62 Fed. 404; 10 C. C. A. 441.

Gandy *v.* Marble, 122 U. S. 432.

§ 384. Licensor or Former Owner.

One of the respondents below was the original patentee, and the title of complainants is derived under assignments from him for a pecuniary consideration, valuable in law, although said to be small. Consequently an estoppel operates against him. The precise nature of this estoppel does not seem to have been always clearly apprehended. It is, in effect, that, when one has parted with a thing for a valuable consideration, he shall not, so long as he retains the consideration, set up his own fraud, falsehood, error or mistake to impair the value of what he has thus parted with. As applied to the specifications of a patent, the vendor patentee is as much barred from setting up that his allegations therein were merely erroneous as that they were wilfully false. — Babcock *v.* Clarkson, 63 Fed. 607; 11 C. C. A. 351.

Sturm *v.* Baker, 150 U. S. 312; Brant *v.* Iron Co. 93 U. S. 326; Cropper *v.* Smith, 26 Ch. Div. 700; L. R. 10 App. Cas. 249; Hall *v.* Conder, 2 C. B. N. S. 22; Chambers *v.* Crichley, 33 Beav. 374; Brazee *v.* Schofield, 124 U. S. 495; Ball *v* Ball, 58 Fed. 818; Clark *v.* Adie, L. R. 2 App. Cas. 423; Trotman *v.* Wood, 16 B. N. S. 479; Crosthwaite *v.* Steele, 6 R. P. C. 190; Ashworth *v.* Roberts, 9 R. P. C. 309.

In a suit for infringement, brought against the assignor of a patent by his assignee, the assignor is estopped from denying the validity of his patent. We cannot say that the patent has been anticipated by prior structures, or that it is void for want of novelty or utility. — Martin *v.* Martin, 67 Fed. 786; 14 C. C. A. 642.

Babcock *v.* Clarkson, 63 Fed. 607 — 58 Fed. 581; Ball *v.* Ball, 58 Fed. 818; Foulks *v.* Kamp, 3 Fed. 898; Onderdonk *v.* Fanning, 4 Fed. 148; Purifier *v.* Guilder, 9 Fed. 155; Curran *v.* Burdsall, 20 Fed. 835; Underwood *v.* Warren, 21 Fed. 573; Parker *v.* McKee, 24 Fed. 808; American *v.* Larraway, 28 Fed. 141; Corbin *v.* Yale, 58 Fed. 563; Chambers *v.* Crichley, 33 Beav. 374; Hocking *v.* Hocking, 4 Web. Pat. Cas. 434; Walton *v.* Lavator, 29 L. J. C. P. 275.

Estoppel was claimed through patents not in suit. *Held:* Non constat that patents which had not been brought to our attention, and not the one in suit, furnish the basis of this alleged estoppel, if such an estoppel can be maintained. — Martin *v.* Martin, 67 Fed. 786; 14 C. C. A. 642.

Being a mere subordinate, he cannot be enjoined, under the circumstances of this case, unless his principles are also subject to injunction. Under the rule in Belnap *v.* Schild, 161 U. S. 10, he cannot be holden to account for profits; so there is no ground for equitable jurisdiction against him severed from the person who employed him. While a person occupying a subordinate position, may be in privity with his principal, in the sense in which that word may properly be used in this connection, the reverse is not ordinarily true. — Boston *v.* Woodward, 82 Fed. 97; 27 C. C. A. 69.

The plaintiff contends that the defendant having granted the license to them, for a valuable consideration, is estopped from denying that the patent is valid, and we are of opinion that he is right in this. In a case recently decided by this court, it was held that the patentee, after having transferred his interest in the patent, was precluded from denying the validity thereof to the same extent, and to the same extent only, that a third person would be, subject to the limitations, however, that he could not allege the total invalidity of the patent. The result being that he is still left at liberty to show that, assuming the patent to be valid, it is nevertheless subject to the limitations imposed thereon by the prior art. — Smith *v.* Ridgley, 103 Fed. 875; 43 C. C. A. 365.

Noonan *v.* Athletic, 99 Fed. 90; Mfg. Co. *v.* Scharling, 100 Fed. 87.

The contention that the defendants are estopped from questioning their (the patent's) validity because of Ratican's relation to them is untenable. Whatever his original part interest in them or his personal conduct with respect to them might have upon his present interests, as to which we express no opinion, the rights of others are now involved in this case, and their relation to Ratican is not so clearly shown as to warrant making any orders affecting their rights on the assumption of identity with him. — St. Louis *v.* Sanitary, 161 Fed. 725; 88 C. C. A. 585.

§ 385. Owner of Patent or Licensee.

The argument is that the United States ought not to be estopped, as a licensee, to deny the validity of the patent because it is not a vendor, but simply a user, of the patented article, and therefore has not enjoyed the advantage of a practical monopoly, as a seller might have enjoyed it even if the patent turned out to be bad. This distinction between sale and use, even for a non-competitive purpose, does not impress us. So far as the practical advantage secured is matter for consideration, whether a thing made

under a patent supposed to be valid is used or sold, it equally may be assumed that the thing would not have been used or sold but for the license from the patentee. — U. S. *v.* Harvey, 196 U. S. 310; 49 L. Ed. 492; 25 S. Ct. 240.

The validity of a patent cannot be disputed by one who undertakes to justify under a license. — Platt *v.* Fire Extinguisher, 59 Fed. 897; 8 C. C. A. 357.

Kinsman *v.* Parkhurst, 18 How. 289; Brown *v.* Lapham, 27 Fed. 77.

The fact that for a time the defendant was a licensee of the patent in suit, cannot, of course, estop the defendant from disputing its validity in a suit for infringements charged to have taken place after the license was withdrawn. Such a fact, in a doubtful case, might have considerable evidential force as an admission of the validity of the patent by the licensee. — Dueber *v.* Robbins, 75 Fed. 17; 21 C. C. A. 198.

The attempt to show by the testimony of the patentee that the patent embraced something which he did not invent, and to restrict the patent to his understanding of the scope of the invention, was unwarranted and improper. Even if he had been a party to the suit, he could not have been bound by a mistaken judgment which he might have been urged to declare of the scope or character of the patent, and, as against the assignee of his title, his testimony in that particular was wholly incompetent. — Elgin *v.* Creamery, 80 Fed. 293; 25 C. C. A. 426.

The question here is whether one who has been under a contract of agency, determinable at will, to sell a patented article, if he discovers or concludes that the patent is valid, may openly repudiate the agency, and, when sued for subsequent acts of infringement, may plead the invalidity of the patent as a defense. We know of no authority, and believe there is no sound reason, to the contrary. — Antisdel *v.* Chicago, 89 Fed. 308; 32 C. C. A. 216.

The defendants had held a license to the patented machines and had marked the machines patented under the patent in suit. The license had expired and the rights of defendants had ceased. *Held:* On questions of utility and invention, facts of this class are sometimes persuasive as matters of evidence but, as the respondents never did use complainant's specific form of feeder, to give these facts any substantial effect in supplementing complainant's case, would be merely reasoning within a circle. — Cushman *v.* Goddard, 95 Fed. 664; 37 C. C. A. 221.

But this estoppel, for manifest reasons, does not prevent him from denying infringement. To determine such an issue, it is admissible to show the state of the art involved, that the court may see what the thing was which was assigned, and thus determine the primary or secondary character of the patent assigned, and the extent to which the doctrine of equivalents may be invoked against the assignor. The court will not assume against an assignor, and in favor of his assignee, anything more than that the invention presented a sufficient degree of utility and novelty to justify the issuance of the patent assigned, and will apply to the patent the same rule of construction, with this limitation, which would be applicable between the patentee and a stranger. — Noonan *v.* Chester, 99 Fed. 90; 39 C. C. A. 426.

Babcock *v.* Clarkson, 63 Fed. 607; Ball *v.* Ball, 58 Fed. 818; Cash Carrier *v.* Martin, 67 Fed. 786; Chambers *v.* Crichley, 33 Beav. 374; Construction Co. *v.* Stromberg, 66 Fed. 550; Clark *v.* Adie, 2 App. Cas. 423.

After the termination of a license, the parties are freed from any estoppel resting upon them while in their former relation. The licensee may dispute

the title or right of the former licensor to the same extent as a stranger might. The estoppel is raised for the protection of the interest which the assignor or licensor professed to convey, and has no further office. — Stimpson *v.* Stimpson, 104 Fed. 893; 44 C. C. A. 241.

Mfg. Co. *v.* Robbins, 75 Fed. 17; Noonan *v.* Athletic, 99 Fed. 90; Smith *v.* Ridgley, 103 Fed. 975.

Being himself the inventor and applicant for the patent, defendant, under well settled principles, may not challenge its validity, and he does not undertake to do so. — Piaget *v.* Headley, 108 Fed. 870; 48 C. C. A. 116.

A subsequent purchaser from a licensor and guarantor takes the patent subject to all equities, but this does not include any obligations of the assignor. — Bradford *v.* Kisinger-Ison, 113 Fed. 811; 51 C. C. A. 483.

There is evidence to show that the Regent Co. had designed the alleged infringing mirrors before employing Curry (one of the inventors of the patent in suit), that Curry had no voice in deciding what should be manufactured, and that his efforts were directed to organizing the factory so as to produce better and cheaper what the Regent Co. had already determined upon. On this showing there is basis for contending that the Regent Co. is not involved in the estoppel against Curry. — Regent *v.* Penn, 121 Fed. 80; 57 C. C. A. 334.

Boston *v.* Woodward, 82 Fed. 97.

Being the assignor, he cannot be permitted to assail the validity of his own patent. — Wold *v.* Thayer, 148 Fed. 227; 78 C. C. A. 350.

Siemens-Halske *v.* Duncan, 142 Fed. 157.

§ 386. Privity.

One who, for his own interests, assumes the defense of an action, is bound by the judgment as if he had been a party thereof or in privity with the defendant. But it must not be overlooked that the rule is subject to the limitation that, in order that one not a party who has assumed the burden of the defense of an action shall be bound by the judgment therein rendered, his connection with the defense must be open and known to the opposite party. Estoppels must be mutual. — Cramer *v.* Singer, 93 Fed. 633; 35 C. C. A. 508.

Herm. Estop. 157; 2 Black. Judgm. sec. 540; Freem. Judgm. 189; Andrews *v.* Pipe Works, 76 Fed. 166; Lacroix *v.* Lyons, 33 Fed. 437; Schroeder *v.* Lahrman, 26 Minn. 87; Ass'n *v.* Rogers, 42 Minn. 123; Allen *v.* Hall, 1 A. K. Marsh, 425.

The evidence before us tends strongly to show that the appellants were privy in fact to the various proceedings involved in this litigation; but if we were to assume that the present appellants were parties in a part of a prior litigation, and that they conducted, controlled, and paid the expenses of that in which they were not parties of record, we could not, in the present aspect of the case accept such conditions as operating as a strict estoppel, for the reason that the final decree in the earlier litigation was not entered after this proceeding was instituted, and is not so pleaded as to strictly and legally present the question of estoppel. — Bresnahan *v.* Tripp, 99 Fed. 280; 39 C. C. A. 508.

An estoppel must be mutual. If the defendants did not openly and avowedly, to the knowledge of complainants, undertake the defense of that suit, the complainants would not have been estopped by the decree, if adverse

to them, in a subsequent suit against the defendants. — Lane *v.* Wells, 99 Fed. 286; 39 C. C. A. 528.

Herm. Estop. p. 157; Andrews *v.* Pipe Works, 76 Fed. 166; Cramer *v.* Mfg. Co. 93 Fed. 636.

Even if B. had been a party, formal admissions made in pleadings by one party to a litigation are not sufficient to bind him in another suit between different parties, involving the same subject-matter. — American *v.* Phoenix, 113 Fed. 629; 51 C. C. A. 339.

Gramophone *v.* Gramophone, 107 Fed. 129.

The doctrine is well settled that one who for his own interest joins in the defense of a suit to which he is not a party of record is as much concluded by the judgment as if he had been a party thereto, provided his conduct in that respect was open and avowed or otherwise well known to the opposite party. An estoppel by decree exists, although the demand in the two cases is not the same, whenever the question upon which the recovery in the second case depends has been before decided, under like conditions, between the same parties or those in privity with them. — Penfield *v.* Potts, 126 Fed. 475; 61 C. C. A. 371.

Lane *v.* Welds, 99 Fed. 286; Southern *v.* U. S. 168 U. S. 1.

§ 387. Miscellaneous.

No principle is better settled than that a party is not estopped by his silence unless it has misled another to his hurt. — Railroad *v.* DuBois, 79 U. S. 47; 20 L. Ed. 265.

Hill *v.* Esplay, 31 Pa. 334.

When the inventor disclosed his invention which defendant did not know was to be patented and defendant used same, he is not estopped by such use to deny the validity of the patent subsequently obtained. — Leggett *v.* Standard, 149 U. S. 287; 37 L. Ed. 737; 13 S. Ct. 902.

The fact that defendant had applied for a patent upon the device which he subsequently infringed and failed does not estop him from denying the novelty of the patent sued on. — Haughey *v.* Lee, 151 U. S. 282; 38 L. Ed. 162; 14 S. Ct. 331.

The same principle is applied to an inventor who makes his discovery public, looks on, and permits others to use it without objection or assertion of a claim for a royalty. In such case he is held to abandon his inchoate right to the exclusive use of his invention, to which a patent would have entitled him, had it been applied for before such use. — Gill *v.* U. S. 160 U. S. 426; 40 L. Ed. 480; 16 S. Ct. 322.

Pennock *v.* Dialogue, 2 Pet. 1, 16.

It may well be doubted whether the pendency of a motion for a new trial would interfere in any way with the operation of the judgement as an estoppel. — Hubbell *v.* U. S. 171 U. S. 203; 43 L. Ed. 136; 18 S. Ct. 828.

Harris *v.* Bernhart, 97 Cal. 546; Chase *v.* Jefferson, 1 Houst. 257; Young *v.* Brehe, 19 Nev. 379.

The issue of estoppel may be raised by the court although neither party intended to raise it. — Woodward *v.* Boston, 63 Fed. 609; 11 C. C. A. 353.

It is said that the right to set up estoppel, was waived in various ways. There was no waiver by the pleadings. The estoppel would properly arise

as a matter of rebuttal by complainant on the proofs, and not on the pleadings. The complainant might have anticipated the defense of invalidity by inserting, in its bill, charges and an avoidance. But it was at its option to do so, and it lost no right by not availing itself of this option. Story Eq. Pl. sec. 33. — Woodward *v.* Boston, 63 Fed. 609; 11 C. C. A. 353.

The defendant, while engaged in selling the patented article, had been accustomed to represent to the public that the patent was valid. As against him, that was better proof of the validity of the letters patent than any ordinary evidence of public acquiescence could have been. — Antisdel *v.* Chicago, 98 Fed. 308; 32 C. C. A. 216.

The appellee contends for an estoppel by reason of a certain release that was obtained from him by the said stockholder and another large stockholder, as a co-partnership just about the time of, or a few days after, the organization of the defendant company. This release was for all past infringements of the parties, in their own personal business, and could not in any way affect the defendant corporation as an estoppel, even if the release had not contained as its concluding paragraph, the following: "It is understood that it does not in any way bind or affect the corporation known as the Newark Spring Mattress Company." — Newark *v.* Ryan, 102 Fed. 693; 42 C. C. A. 594.

In the absence of an expressly proved fraud, there can be no estoppel based upon acts or conduct of the party sought to be estopped, where such conduct is as consistent with honest purpose or with absence of negligence, as with their opposites. — Standard *v.* Arrott, 135 Fed. 750; 68 C. C. A. 388.

EVIDENCE.

§ 388. Statutory Provisions.

The Patent Act makes only the following special provisions:

Written or printed copies of any records, books, papers, or drawings belonging to the Patent Office, and of letters patent authenticated by the seal and certified by the Commissioner or Acting Commissioner thereof, shall be evidence in all cases wherein the originals could be evidence; and any person making application therefor, and paying the fee required by law, shall have certified copies thereof. — R. S. 892.

Copies of the specifications and drawings of foreign letters patent certified as provided in the preceding section, shall be prima facie evidence of the fact of the granting of such letters patent, and of the date and contents thereof. — R. S. 893.

The printed copies of specifications and drawings of patents, which the Commissioner of Patents is authorized to print for gratuitous distribution, and to deposit in the capitols of the States and Territories, and in the clerk's offices of the district courts, shall, when certified by him and authenticated by the seal of his office, be received in all courts as evidence of all matters therein contained. — R. S. 894.

§ 389. Anticipation — Prior Art.

No notice was necessary to justify the admission of evidence to show the state of the art. — Vance *v.* Campbell, 66 U. S. 427; 17 L. Ed. 168.

Evidence of the state of the art is admissible in actions at law under the general issue without a special notice, and in equity cases without any averment in the answer touching the subject. It consists of proof of what was old and in general use at the time of the alleged invention. It is received for these purposes and none other — to show what was then old, to distinguish what was new, and to aid the court in the construction of the patent. — Brown *v.* Piper, 91 U. S. 37; 23 L. Ed. 200.

Proof of the state of the art is admissible in equity cases without any averment in the answer touching the subject, and in actions at law without notice. It consists of proof of what was old and in general use at the time of the alleged invention and may be admitted to show what was the old, or to distinguish what is new, or to aid the court in the construction of the patent. — Dunbar *v.* Meyers, 94 U. S. 187; 24 L. Ed. 34.

Evidence showing the state of the art to limit the construction of the patent is competent under a general denial without special pleading. — Zane *v.* Soffe, 110 U. S. 200; 28 L. Ed. 119; 3 S. Ct. 562.

We have the material for ascertaining its meaning in that view, by means of the evidence on that point contained in the record, which, although objected to on the ground that no prior use or knowledge of the invention claimed has been specifically set up in the answer as a defense, was nevertheless admissible for the purpose of defining the limits of the grant in the original patent and the scope of the invention described in the specification. — Eachus *v.* Broomall, 115 U. S. 429; 29 L. Ed. 419; 6 S. Ct. 229.

Vance *v.* Campbell, 1 Black. 427; Brown *v.* Piper, 91 U. S. 37.

Although the specification of the patent set forth the state of the art sufficiently, the testimony of an expert was admissible, though unnecessary. — Ecaubert *v.* Appleton, 67 Fed. 917; 15 C. C. A. 73.

The defense of want of invention, including the right to introduce evidence of the prior art, is always open, and it is not necessary to set it up in the answer. — Baldwin *v.* Kresl, 76 Fed. 823; 22 C. C. A. 593.

Richards *v.* Elevator Co. 158 U. S. 299.

Ordinarily, prior patents can be offered in evidence, when not specially pleaded, only for the purpose for which the appellee offers the patent to which his motion refers; that is to say, only for the purpose of construing and

limiting the claims of the patent without affecting their validity. — Parsons *v.* Seelye, 100 Fed. 452; 40 C. C. A. 484.

Grier *v.* Wilt, 120 U. S. 412; Edmund Pat. 2 ed. 650.

That prior patents not presented to the circuit court and no explanation of them given will not be considered on appeal, see Scott *v.* Lazell, 160 Fed. 472; 87 C. C. A. 456.

§ 390. Anticipation — Prior Patent or Publication.

Letters patent, though not set up in the answer, may be received in evidence to show the state of the art and to aid in the construction of the plaintiff's claim, though not to invalidate the claim on the ground of want of novelty when properly construed. — Grier *v.* Wilt, 120 U. S. 412; 30 L. Ed. 712; 7 S. Ct. 718.

Vance *v.* Campbell, 66 U. S. 427; Railroad *v.* Dubois, 79 U. S. 47; Brown *v.* Piper, 91 U. S. 37; Eachus *v.* Broomall, 115 U. S. 429.

The respondents cite over 40 patents alleged to either anticipate or narrow the art. Our general observation as to these is that the citation of so many patents by the respondent in an infringement suit sometimes tends, as we have several times said, not so much to weaken the complainant's position as to strengthen it, by showing that the trade had long and persistently been seeking in vain for what the complainant finally accomplished. — Forsyth *v.* Garlock, 142 Fed. 461; 73 C. C. A. 577.

The defense (anticipation) is only suggested by injecting a large number of prior patents into the record without any explanatory testimony. If an examination of the prior art were necessary to the decision of the case, we should not sustain the defense of anticipation upon such mere production of patents for complicated combinations of machinery. — Bell *v.* MacKinnon, 149 Fed. 205; 79 C. C. A. 163.

That a prior patent which fails to mention or disclose a use which it is alleged to anticipate will not be held to possess such qualities to defeat a subsequent patent of undoubted utility, see Lewis *v.* Premium, 163 Fed. 950; C. C. A.

Barbed Wire Pat. 143 U. S. 275; Deering *v.* Winona, 155 U. S. 286.

The Zimmer publication must be given effect as an anticipation only to the extent that it actually gave the public information of a process of filtration. It is not competent to read into such a publication information which it does not give, or by expert opinion explain an otherwise uninforming statement by evidence of some apparatus or article not itself competent as an anticipation. — Loew *v.* German-American, 164 Fed. 855.

Badische *v.* Kalle, 104 Fed. 802.

§ 391. Anticipation — Prior Use.

The alleged prior use must be certain and the anticipating invention reduced to practice. But prior knowledge and use by a single person is sufficient. — Coffin *v.* Ogden, 85 U. S. 120; 21 L. Ed. 821.

Gayler *v.* Wilder, 10 How. 496; Reed *v.* Cutter, 1 Story, 590; Bedford *v.* Hunt, 1 Mus. 303.

The burden of proof of prior use is on the defendant. — Brown *v.* Guild, 90 U. S. 181; 23 L. Ed. 161.

Under a general denial of the patentee's priority of invention, evidence of prior knowledge and use, taken without objection, is competent at the final hearing on the question of the validity of the patent. — Zane *v.* Soffe, 110 U. S. 200; 28 L. Ed. 119; 3 S. Ct. 562.

Loom Co. *v.* Higgins, 105 U. S. 580.

Testimony of prior use, produced after adjudication and unsifted by cross-examination, is always to be accepted with caution. It must be most clear and convincing to warrant what is substantially a reversal of an adjudication at a final hearing. — Consolidated *v.* Hays, 100 Fed. 984; 41 C. C. A. 142.

Such evidence, especially when it deals with experiments which resulted only in some two or three specimens, which never left the shop, and were seen years before by but a few persons, who, in giving their recollection of dates, are unable to fix such dates by reference to some transaction whose date is susceptible of definite proof, is rarely satisfactory. — Lein *v.* Myers, 105 Fed. 962; 45 C. C. A. 148.

That a mere accidental or fugitive occurrence is not sufficient in itself to defeat a patent, see Edison *v.* Novelty, 167 Fed. 977; C. C. A.

§ 392. Anticipation — Rebuttal.

The defendant may at all times, under proper pleadings, resort to prior use and the general history of the art to assail the validity of a patent or to restrain its construction. The door is then opened to the plaintiff to resort to the same kind of evidence in rebuttal; but he can never go beyond his claim. — Keystone *v.* Phoenix, 95 U. S. 274; 24 L. Ed. 344.

Where plaintiff had introduced evidence of want of novelty and defendant had rebutted such evidence it was within the discretion of the court to refuse to allow the plaintiff to introduce further evidence. — St. Paul *v.* Starling, 140 U. S. 184; 35 L. Ed. 404; 11 S. Ct. 803.

After defendant had introduced in evidence earlier patents, it was proper for plaintiff to show that prior to the date of any of them he had reduced his invention to a working form. — St. Paul *v.* Starling, 140 U. S. 184; 35 L. Ed. 404; 11 S. Ct. 803.

Elizabeth *v.* Nicholson, 97 U. S. 126; Webster *v.* Higgins, 105 U. S. 580.

Evidence introduced on rebuttal to change the character and force of the prima facie proofs comes too late to be of much weight. — Forgie *v.* Oil Well Supp. Co. 58 Fed. 871; 7 C. C. A. 551.

§ 393. Anticipation — Miscellaneous.

Witness was asked if defendant's machine was like the model in evidence. Objected to on the ground that no notice had been given covering the model. Objection overruled and sustained. — Evans *v.* Hittich, 7 Wheat. 453; 5 L. Ed. 496.

The want of invention in a patent is a matter of defense unless the thing for which a patent is claimed shows on its face that it is without invention. — Hunt Bros. *v.* Cassidy, 53 Fed. 257; 3 C. C. A. 525.

Walk. Pat. sec. 599; Mahn *v.* Harwood, 112 U. S. 354; Hendy *v.* Iron Works, 127 U. S. 370.

It was stipulated that testimony in either one of two pending cases might be used in the other. A patent, without pleading and without notice was introduced in one case for other purposes, and was then set up in the other case in anticipation. Neither pleading nor proof was made to bring it in. *Held:* It was not the intention of the stipulation that a patent offered for one purpose in one case could be used in the other case as an anticipation, without an amendment of the pleadings and without a scintilla of testimony by which the complainant could be warned so as to offer seasonable testimony in regard to the history and character of the alleged anticipation, before the record reached the appellate court. — Vermont *v.* Gibson, 56 Fed. 143; 5 C. C. A. 451.

§ 394. Assignment.

The appellee produced a license in its possession absolute on its face and without any limitation or condition. The burden of proof is upon the appellants to show that it was delivered as an escrow. — Mellon *v.* D. L. & W. 154 U. S. 673; 26 L. Ed. 929; 14 S. Ct. 1194.

But it is the settled rule with respect to the construction of patents that the prior state of the art is admissible in evidence "to show what was old, to distinguish what was new, and to aid the court in the construction of a patent." That this rule applies as between assignor and assignee has been held by this court in two carefully considered cases, — Ball *v.* Ball, 58 Fed. 818, and Babcock *v.* Clarkson, 63 Fed. 607 — 58 Fed. 581. — Martin *v.* Martin, 67 Fed. 786; 14 C. C. A. 642.

Brown *v.* Piper, 91 U. S. 37; Eachus *v.* Broomall, 115 U. S. 429; Grier *v.* Wilt, 120 U. S. 412.

§ 395. Depositions.

A deposition, though in improper form read in evidence without objection and with acquiescence and consent cannot afterwards be objected to. — Evans *v.* Hittich, 7 Wheat. 453; 5 L. Ed. 496.

Statement: Complainant, on order under sec. 870 Code Civ. Pro. N. Y. was examined under objection and exception. Certified to Supreme Court. *Held:* That the order of the Circuit Court directing the president of defendant to appear before a master or commissioner appointed pursuant to the provisions of secs. 870 et sq. of the N. Y. Code of Civil Procedure was invalid and not authorized under the act of Mar. 9, 1892. — Hanks *v.* International, 194 U. S. 303; 48 L. Ed. 989; 24 S. Ct. 700.

The courts of the United States are not given discretion to take depositions not authorized by Federal law, but, in respect of depositions thereby authorized to be taken, they may follow the Federal practice in the manner of taking or that provided by the state law. — Hanks *v.* International, 194 U. S. 303; 48 L. Ed. 989; 24 S. Ct. 700.

Note: Holding the taking of depositions before trial under N. Y. Code to be bad. Citing cases holding all sorts of ways.

§ 396. Documentary.

These objections to proof of records were not urged in the court below, and by well settled principles of practice applicable to appellate courts they cannot be raised here in the first instance. — Paine *v.* Trask, 56 Fed. 233; 5 C. C. A. 497.

Wasatch *v.* Crescent, 148 U. S. 293; Rules Supreme Court, No. 13.

At the hearing in this court, the appellee claimed that this certified copy has probative force of itself and makes out a prima facie case of an assignment. He cited, as sustaining this proposition, Lee *v.* Blandy, 1 Bond, 361. He might also have cited Brooks *v.* Jenkins, 3 McLean, 432; Parker *v.* Haworth, 4 Fed. 370; Dederick *v.* Agricultural Co. 26 Fed. 763; and Rob. Pat. sec. 1040, Walker on Pat. (2 ed. sec. 495) referring to these decisions says that they have been generally acquiesced in for 20 years, and that few rules of patent law have been more frequently made the basis of action by counsel and by courts than the one which they apparently sustain. The author, however, adds "but it hardly seems justified by statute upon which it is based and may even yet be overthrown by the Supreme Court."

R. S. 892, which provides for certified copies from the patent office, relates only to records, books, papers or drawings, "belonging to" that office, and letters patent. If the law required the original assignments to remain on file, and that certified copies should be given of them, a different principle would be involved; but the only thing in this case "belonging to" the patent office, is the record, which is itself only secondary evidence. No provision is made for authentication of the genuineness of the instrument to be recorded, as frequent in laws providing for registry, but a forged assignment may be recorded equally with a genuine one. Neither is there any method given by the law, by which any person prejudiced by the registry in the patent office of a spurious instrument, can purge the records. Neither does this registry have the moral protection presumably given to local county and township records through local publicity and notoriety. The proposition as made by the appellee, is independent of the support which sometimes comes from the fact that one party or the other to an alleged instrument has continued openly to act under it, or from the credibility given to ancient papers and records; but it stands as a universal unqualified claim, with reference to all copies of assignments certified from the patent office records.

It is not, however, necessary that we should determine this point, and we refer to it only for the purpose of making it understood that we cannot acquiesce in it without further consideration. — Paine *v.* Trask, 56 Fed. 233; 5 C. C. A. 497.

Charges were presented against the examiner who passed the application and against the solicitor, asking for the dismissal of the one and the disbarment of the other. Upon these charges the commissioner made a written decision. The charges and the decision were offered by the complainants, and were properly objected to as irrelevant. These proceedings were res inter alios actae, and were of no value in this case. — Ecaubert *v.* Appleton, 67 Fed. 917; 15 C. C. A. 73.

The opinion of the commissioner of patents was properly rejected as irrelevant. The record of the judgement or decree would have been admissible, but the opinion of the commissioner was not a decree, and was not the finding of facts which a court is frequently called upon to make. — Ecaubert *v.* Appleton, 67 Fed. 917; 15 C. C. A. 73.

Buckingham's Appeal, 60 Conn. 143.

The printed copy of the testimony in the interference proceedings before the patent office was properly rejected upon the grounds of irrelevancy. This suit is an independent one, although between the same parties as in the patent office proceeding. — Ecaubert *v.* Appleton, 67 Fed. 917; 15 C. C. A. 73.

That uncertified copies of U. S. letters patent introduced in evidence and not objected to at the proper time are good evidence as to dates, such as the date of invention, see Drewson *v.* Hartje, 131 Fed. 734; 65 C. C. A. 548.

Worley *v.* Tobacco, 104 U. S. 340; Roemer *v.* Simon, 95 U. S. 214; Loom Co. *v.* Higgins, 105 U. S. 580.

§ 397. Exhibits.

Where an alleged prior invention is introduced as an exhibit and accepted by the examiner it is in evidence; and if improper should have been stricken out on motion before the court below. — Clark *v.* Willimantic, 140 U. S. 481; 35 L. Ed. 521; 11 S. Ct. 846.

Hoskin *v.* Fisher, 125 U. S. 217.

If, against the earnest protest of their opponent, they availed themselves of a technicality to prevent a consideration by the court of a patent which they claimed will disclose want of novelty in the invention of the patent in suit, they cannot complain if the court declines to accept their unsupported assertion of the character of that patent. — Red Jacket *v.* Davis, 82 Fed. 432; 27 C. C. A. 204.

The court certainly has the unquestioned right to draw its own conclusions from an exhibition and inspection of the respective machines, or models thereof, as well from the opinion of expert witnesses. It is not bound to accept such testimony as conclusive. — Overweight *v.* Improved, 94 Fed. 155; 36 C. C. A. 125.

The Conqueror, 166 U. S. 111.

Note: As an illustration of the manner in which such a rule, if it were a rule, would utterly fail, suppose that the court had before it a Tesla motor, alleged to be of the polyphase type, and the court should attempt to pass upon the value of that exhibit regardless of the expert testimony essential to determine whether it was a motor of the polyphase type or multiphase or lagphase, or any other of the numerous forms of phase winding which would be absolutely indistinguishable to the naked eye.

The publication was put in evidence by the defendant himself. He may, indeed, have intended to use it for another purpose, but the publication was in the case as evidence for every legitimate purpose. — Maurer *v.* Dickerson, 113 Fed. 870; 51 C. C. A. 494.

Certain patents were printed and indexed in the record and were referred to on the argument. On rehearing it was objected that these patents were not "offered in evidence." *Held:* In view of these circumstances, the objection made at this late day, that the examiner did not formally mark it in evidence as an exhibit, is one not calculated to commend itself to an appellate court. — Smyth *v.* Sheridan, 149 Fed. 208; 79 C. C. A. 166.

§ 398. Expert.

Experts may be examined as to the meaning of terms of art on the principle of "*cuique in suo arte credendum*," but not as to the construction of written instruments. — Corning *v.* Burden, 15 How. 252; 14 L. Ed. 683.

Experts may be examined to explain terms of art, and the state of the art at any given time. They may explain to the court and jury the machines, models or drawings exhibited. They may point out the difference or identity of the mechanical devices involved in their construction. The maxim of *cuique in suo arte credendum* permits them to be examined to questions of art or science peculiar to their trade or profession; but professors or mechanics cannot be received to prove to the court or jury what is the proper or legal construction of any instrument of writing. A judge may obtain information

from them, if he desire it, on matters which he does not clearly comprehend, but cannot be compelled to receive their opinions as matter of evidence. — Winans *v.* New York & Erie, 21 How. 88; 16 L. Ed. 68.

It cannot be expected that the court will possess the requisite knowledge for this purpose, and when necessary it should avail itself of the light necessary by evidence. — Loom Co. *v.* Higgins, 105 U. S. 580; 26 L. Ed. 1177.

Where an expert has merely made experiments for the purposes of the litigation and from such experiments testifies that the results attained by defendant could be attained only by plaintiff's process; and his evidence is rebutted by an experienced expert who establishes the fact that the results had been attained by more than one process to his knowledge, although he does not testify by what process defendant did attain such results, such evidence is sufficient to rebut the negative testimony of complainant's expert. — Béné *v.* Jeantet, 129 U. S. 683; 32 L. Ed. 803; 9 S. Ct. 428.

It would seem that the Supreme Court would disregard the opinions of eminent chemists where such chemists had found a degree of difference in the processes to warrant them in holding the new process to be novel. Such seems to be the position assumed by Justice Blatchford in the case of Commercial *v.* Fairbank, 135 U. S. 176; 34 L. Ed. 88; 10 S. Ct. 972.

Expert testimony is admissible to explain the several drawings, models and machines that are exhibited upon the trial, their operation, purpose and effect, and the differences which exist in the various devices involved in their construction. The opinion of an expert is, in certain cases, admissible in evidence, but it is not conclusive upon the courts. It is to be considered as the judgment and opinion of a person who has had extensive practice, education and knowledge in relation to the particular subject upon which his testimony is given. If the reasons given by the expert witness are deemed reasonable and satisfactory, the court may adopt them, but, if they are unsatisfactory, the court will discard the testimony and act upon its own knowledge and judgment. — Norton *v.* Jensen, 49 Fed. 859; 1 C. C. A. 452.

To sustain the defense of want of novelty the defendants have set up in their answer, and offered in evidence, a large number of patents prior in date to those of the complainant. In the absence of any expert testimony to explain these patents, or indicate what they contain tending to negative the novelty of the complainant's patent, we do not feel called upon to examine them. There may be cases in which the character of the invention has so little complexity that such expert testimony is not necessary to aid the court in understanding whether one patent, or several patents considered together, describe the devices or combination of devices which are the subject matter of a subsequent patent; but this is not one of them. — Waterman *v.* Shipman, 55 Fed. 982; 5 C. C. A. 371.

Scientific expert evidence is not wholly reliable when not subjected to the search light of intelligent cross-examination. — Standard Elevator Co. *v.* Crane, 56 Fed. 718; 6 C. C. A. 100.

If a valuable patent might be overthrown by the testimony of an expert without careful inquiry into and virtual demonstration of its correctness, the rights of patentees would rest upon the testimony of such witnesses rather than the judgement of the court. — National *v.* Belcher, 71 Fed. 876; 18 C. C. A. 375.

In these expressions (determining what was novel) the expert, as is too common in the taking of evidence of that class, goes beyond the province of an expert and into the province of counsel or the court. — Osgood *v.* Metropolitan, 75 Fed. 670; 21 C. C. A. 491.

No detailed analysis of the specifications is made by any of them. The testimony consists of little more than bare opinions. They give no reasons for their conclusions. — Hanifen *v.* Godshalk, 84 Fed. 649; 28 C. C. A. 507.

The testimony of a capable and conscientious expert, in a case which admits of his employment cannot but be at once helpful to the court and creditable to the witness; but it is a sorry situation for the display either of skill or candor when, not to hurt the cause he was employed to promote, the expert must suppress his opinions upon all matters of controlling significance, and restrict his testimony to the pointing out of superficial and obvious distinctions of structural forms that involve no conceivable differences of function or operation, — a task of mere drudgery, which a common mechanic, accustomed to work by lines laid down for him by another, could perform quite as well. — Chuse *v.* Ide, 89 Fed. 491; 32 C. C. A. 260.

The value of expert testimony generally depends upon the facts stated, as a reason for their opinions and conclusions. — Overweight *v.* Improved, 94 Fed. 155; 36 C. C. A. 125.
Green *v.* Terwilliger, 56 Fed. 384; 1 Tay. Ev. sec. 58.

That in the absence of expert or scientific explanation of a physical distinction in operation urged upon the argument, the court will not consider such argument, see Dececo *v.* Gilchrist, 125 Fed. 293; 60 C. C. A. 207.

We do not question the rule which permits a complainant to introduce a patent whose mechanical details are simple, and where the issue of infringement is sharply defined, without burdening the court with useless expert testimony. But this rule has no application to a case like this, where the operative construction embodies only a portion of the two patents in suit; where material and difficult questions of form, of operation, and of equivalency of function are involved; where the validity of a reissue is challenged on the ground that the reissued patent is for a different invention; and where the 39 claims of one of the patents are projected before the court without any attempt to analyze them, or read them upon defendant's patent or commercial machine. — Fay *v.* Mason, 127 Fed. 325; 62 C. C. A. 159.
Waterman *v.* Shipman, 55 Fed. 982.

We are aided in the examination of this question by the evidence of experts, but their opinions are not conclusive. We must form our own opinion, based on all the evidence. — American *v.* American, 128 Fed. 709; 63 C. C. A. 307.
Hardwick *v.* Masland, 71 Fed. 887.

Unhappily we cannot accept without reservation the opinions of the experts who have been examined as witnesses, for they are necessarily partisans of the side calling them, and essentially advocates, and their opinions are contradictory, and tend to perplex, instead of elucidating, although they appear to be gentlemen of great ability and deserved eminence. — Ideal *v.* Crown, 131 Fed. 244; 65 C. C. A. 436.

The Segrist patents were not discussed or explained by either counsel on the argument, no model was produced. In these circumstances we are not

disposed to critically discuss the Segrist patents. — Greene *v.* Buckley, 135 Fed. 520; 68 C. C. A. 70.

The admission of an expert witness, is, of course, entitled to weight in the interpretation of technical terms employed in a patent. But the court is not necessarily concluded by such interpretation when other satisfactory evidence is available. — Panzl *v.* Battle Island, 138 Fed. 48; 70 C. C. A. 474.

Defendant's expert claims that this difference of operation is material. But the fact that the defendant commercially manufactures and sells saw-sets with this construction indicates that the difference is theoretical rather than practical. — Morrill *v.* Hardware, 142 Fed. 756; 74 C. C. A. 18.

The defendant undertook to prove that the Blandfield and Andrews supporters (the alleged anticipation) were the embodiment of perfection; the complainant that they were the embodiment of stupidity; and, as generally happens, both succeeded. — Parramore *v.* Siegel-Cooper, 143 Fed. 516; 74 C. C. A. 386.

When once familiarity with the nomenclature and the elementary features of the art is acquired, the character and functions of the respective structures are found to be clearly displayed therein (in the patents). Indeed they are far more illuminative than some of the so-called "simplified diagrammatic drawings" which have been put in evidence. If the expert who is called to testify in such causes would only appreciate that he is not addressing electrical engineers, but laymen, and if, when undertaking to describe what some particular patent showed to a man skilled in the art, he would take the specifications and drawings of the patent as his text, instead of some conventional paraphrase of his own devising with its lettering entirely changed, he would materially lighten the labor of the court. — Western *v.* Rochester, 145 Fed. 41; 75 C. C. A. 313.

We note that more than two thirds of the nearly 1000 pages in this record are taken up by the testimony of expert witnesses, of whom there were 11 or 12, arrayed in about equal numbers on the opposite sides, and the reading of it has imposed upon the court a needless burden. As a contest between gentlemen learned in the science of the subject, it might be interesting if one had leisure, though it seems sometimes to run into very attenuated points. This prolixity seems not so much the fault of the witnesses as a mistake of the counsel. It is not the province of witnesses to advocate the cause of the party who calls him, nor to pass upon the questions of law or facts presented by the controversy. Frequently an expert witness may be of much aid to the court in explaining matters which can only be appreciated and understood by learning higher than the ordinary; but his province is to instruct and not to decide; and even the instruction is of uncertain value when it is colored from standing in the place of the partisan for one of the parties. Usually the testimony of one competent witness on each side is enough to insure a full and fair elucidation of what is recondite in the case. The voice of a single teacher is worth more than a confusion of many tongues. And the expense is worse than useless. — American *v.* Cleveland, 158 Fed. 978; 86 C. C. A. 182.

§ 399. Infringement.

The five averments must all be established. — Cammeyer *v.* Newton, 94 U. S. 225; 24 L. Ed. 72.

Where denial of infringement is made in the answer under oath, infringement must be shown by satisfactory proof. — Lehigh *v.* Mellon, 104 U. S. 112; 26 L. Ed. 639.

The burden of proof of infringement is upon the complainant. — Price *v.* Kelly, 154 U. S. 669; 26 L. Ed. 634; 14 S. Ct. 1208.

In a suit at law where evidence was taken and the question of infringement was determined this court will not review the evidence as if it were a suit in equity. — St. Paul *v.* Starling, 140 U. S. 184; 35 L. Ed. 404; 11 S. Ct. 803.

§ 400. Invention — Fact of.

The question is now well settled, that the question whether the alleged improvement is or is not patentable, is, in an equity suit, a question for the court. — Dunbar *v.* Meyers, 94 U. S. 187; 24 L. Ed. 34.

We have now to allude to a most important factor in determining the weight of evidence, a factor which seems to us to have been overlooked by the learned judge of the court below. It is, that the burden of proof is on the one who disputes it, to repel the presumption of originality arising from the patent. This is a well established rule of evidence, and is the result of long judicial experience in considering the foundations of belief. In a case like the present, it is not a mere balancing of the weight of testimony on one side or the other, but it is a requirement that this presumption of originality of invention must be overcome by proof which fully satisfies the mind respecting the fact. — Keasbey *v.* American, 143 Fed. 490; 74 C. C. A. 510.

When the question (whether he knew of the fact of the application of one of the defendants for a patent) was again asked him on cross-examination, he answered, "To the best of my knowledge and recollection, he never did!" This will not do as an answer to the unequivocal testimony of the defendant inventor. — Keasbey *v.* American, 143 Fed. 490; 74 C. C. A. 510.

§ 401. Law Actions — Depositions.

The Massachusetts interrogatories are sought as a "mode of proof in trials at law." The answers to them are not oral testimony, and therefore, to be admitted must be brought within the exceptions specified in the Revised Statutes. They are not a deposition taken under the circumstances in which it is permitted to take a deposition, by sections 863 and 865 of the Revised Statutes, and, like the New York examination, the Massachusetts interrogatories violate common usage by seeking to call the party in advance of the trial at law, and to "subject him to all the skill of opposing counsel to exact something which he may use then or not as suits his purpose." As the Massachusetts interrogatories fall neither within the rule of section 861 nor within the exceptions allowed by the following section, and as that rule and those exceptions provide an exclusive mode of proof in trials at law in the federal courts, it would seem that the interrogatories are inadmissible here. — National *v.* Leland, 94 Fed. 502; 37 C. C. A. 372.

Railway *v.* Botsford, 141 U. S. 250; ex parte Fisk, 113 U. S. 713.

It is further contended by the plaintiff that the interrogatories in question are admissible as a statutory substitute for a bill of discovery in aid of an action at law, and are thus brought within the provision of section 914 of the Revised Statutes. This view of the Massachusetts interrogatories was taken by the circuit court for this district in Bryant *v.* Leyland, 6 Fed. 125. We think the contention unsound. The Supreme Court has constantly

maintained the distinction between the system of law and equity, and has refused to adopt into the practice of the federal courts any part of the practice of the state courts which confounds the two systems. Moreover, the provisions of section 914 apply only to suits at law in the federal courts, and, in the absence of express language, can hardly be intended to introduce into the practice and procedure of such suits statutory procedure which is in its nature plainly equitable. We find, therefore, that it has been decided by the Supreme Court that, if the statutory interrogatories are to be treated as laying the foundation for a deposition, they are inadmissible in federal practice, because a deposition is not authorized to be taken in such a case by the statutes of the United States; that an examination authorized by state statutes has been excluded on this ground when such examination though not altogether similar, was yet in most respects similar to the interrogatories in the case at bar, the grounds for the exclusion, as stated by the Supreme Court, being largely applicable to the interrogatories in this case. We find, furthermore, that, if these interrogatories are to be treated, not as questions put to a deponent, but as a statutory substitute for a bill of discovery, they are excluded as an encroachment upon that control of equity procedure which belongs to the federal courts except when regulated in express terms by an act of congress. — National *v.* Leland, 94 Fed. 502; 37 C. C. A. 372.

The plaintiff further contends that, even if the statutory interrogatories be treated as the taking of an ordinary deposition, and hence forbidden by section 861, yet they are permitted by chapter 14 of the Act of 1892 (27 Stat. 7), which permits the taking of depositions in the mode described by the laws of the state in which the courts are held. This position seems to us plainly untenable. The act of 1892, as stated by the learned judge in the circuit court, was intended only "to simplify the practice of taking depositions by providing that the mode of taking in instances authorized by the federal laws might conform to the mode prescribed by the laws of the state in which federal courts were held," and not "to authorize the taking of depositions in instances not heretofore authorized by the federal statutes, and to confer additional rights to obtain proofs by interrogatories addressed to the adverse party in actions at law." For these reasons the exception to the refusal of the judge of the circuit court to default the defendants must be overruled. — National *v.* Leland, 94 Fed. 502; 37 C. C. A. 372.

§ 402. Law Actions — Directions and Instructions.

The judgement entered on the verdict rendered in favor of the defendants, in pursuance of the direction of the court, can be maintained only on the ground, either that the legal identity of the furnace described by Karsten with that covered by plaintiff's patent was manifest as a matter of law, or that it was established as a matter of fact so conclusively by the evidence that a verdict the other way could not be supported, within the rule as stated in Randall *v.* Baltimore, 109 U. S. 878. — Keyes *v.* Grant, 118 U. S. 25; 30 L. Ed. 54; 6 S. Ct. 974.

It is not error to refuse to instruct as to an abstract question, and instructions should never be given upon hypothetical statements of fact, of which there is no evidence. — Haines *v.* McLaughlin, 135 U. S. 584; 22 L. Ed. 241; 10 S. Ct. 876.

§ 403. Law Actions — Facts — For Court.

So far as concerns what is for the court and what is for the jury, there is no essential distinction between patents for inventions and other instruments. Primarily the construction of all of them is for the court. — DeLoria *v.* Whitney, 63 Fed. 611; 11 C. C. A. 355.

§ 404. Law Actions — Facts — For Jury.

In law actions the question of infringement is a question of fact for the jury. — Turrill *v.* R. R., 68 U. S. 491; 17 L. Ed. 668.

It is said properly, whether one compound of given proportions is substantially the same as another compound varying in the proportions — whether they are substantially the same or substantially different — is a question of fact and for the jury. — Tyler *v.* Boston, 74 U. S. 327; 19 L. Ed. 93.

Questions of fact must be submitted to the jury if there is so much resemblance as raises the question at all. — Tucker *v.* Spalding, 80 U. S. 453; 20 L. Ed. 515.

This court has no more right than the court below to have decided that the one patent covered the invention of the other or that it did not. — Tucker *v.* Spalding, 80 U. S. 453; 20 L. Ed. 515.

A pure question of fact is for the jury in an action at law, and it is error to take it away. — Burdell *v.* Denig, 92 U. S. 716; 23 L. Ed. 764.

All questions of fact are exclusively for the jury to decide. The court does not decide nor instruct you whether any device was or was not an anticipation of plaintiff's patent. The question of anticipation is purely a question of fact and is exclusively for the jury to determine. — Haines *v.* McLaughlin, 135 U. S. 584; 22 L. Ed. 241; 10 S. Ct. 876.

This court has had occasion more than once, to reverse the trial courts for taking away from the jury the question of infringement, which they have sometimes done by rejecting evidence of earlier patents offered to show anticipation, and sometimes by a peremptory instruction that a patent relied on by the defense was or was not infringement of plaintiff's patent. — Coupe *v.* Royer, 155 U. S. 565; 39 L. Ed. 263; 15 S. Ct. 199.

Tucker *v.* Spalding, 80 U. S. 453; Bischoff *v.* Wethered, 76 U. S. 815; Keyes *v.* Grant, 118 U. S. 36; Royer *v.* Schultz, 135 U. S. 319.

There was no question to go to the jury in this case (the court having determined want of novelty) and the court should have directed a verdict. — Black Diamond *v.* Excelsior, 156 U. S. 611; 39 L. Ed. 553; 15 S. Ct. 482.

This is a question of fact, and in a law case should be submitted to the jury under proper instructions, as to the law applicable to the same. — Hunt Bros. *v.* Cassidy, 53 Fed. 257; 3 C. C. A. 525.

When there is any evidence whatever to go to the jury upon an issue of fact, the refusal of the court to instruct the jury to return a verdict for the defendant is not reviewable in this court. There is nothing in the case before the court to make it an exception to the rule. — Singer Mfg. Co. *v.* Brill, 54 Fed. 380; 4 C. C. A. 374.

Explaining: Heald *v.* Rice, 104 U. S. 737; Lumber Co. *v.* Rodgers, 112 U. S. 659; Fond Du Lac *v.* May, 137 U. S. 395.

Under the issue and evidence, it was for the jury to decide whether the defendant had been licensed to use the patented appliances, and whether the defendant was charged with notice of the patent. — Houston *v.* Stern, 74 Fed. 636; 20 C. C. A. 636.

The question of novelty is a question of fact for the jury, or, when a jury is waived, is a question of fact to be decided by the court. — American *v.* Bullivant, 117 Fed. 255; 54 C. C. A. 287.

Westlake *v.* Carter, 6 Fish. P. C. 519; Battin *v.* Taggart, 17 How. 74.

The question of invention is one of fact, and after examining the testimony we are of opinion that there was sufficient evidence to warrant its submission to the jury. The jury having found for the plaintiffs, the verdict should not be disturbed. — Willis *v.* Miller, 121 Fed. 985; 58 C. C. A. 286.

§ 405. Law Actions — Rules of.

Except as otherwise prescribed by the laws of the United States, state laws governing the admissibility of evidence obtain at common law. — Vance *v.* Campbell, 66 U. S. 427; 17 L. Ed. 168.

§ 406. Law Actions — Miscellaneous Rules.

This contention (want of novelty and non-infringement) in each of its branches, presents a mixed question of law and of fact. — Graham *v.* Earl, 92 Fed. 155; 34 C. C. A. 267.

1 Rob. Pat. 272; California *v.* Molitor, 113 U. S. 609.

That a patent not pleaded, may be introduced in evidence in a law action, not for the purpose of proving anticipation, but for the purpose of showing the prior art to enable the court to construe the claim, may be so employed, see Overweight *v.* Improved, 94 Fed. 155; 36 C. C. A. 125.

On objection by the defendant, the learned judge below held that the witness might describe the results of the omission of the connecting mechanism, but could not be permitted to call that omission a "fatal fault," as the word "fatal" contained an inference which went beyond the province of an expert. — National *v.* Leland, 94 Fed. 502; 37 C. C. A. 372.

That where the mechanism is such that it is difficult for an ordinary person to understand it, an expert may testify as to what are and what are not equivalents, see National *v.* Leland, 94 Fed. 502; 37 C. C. A. 372.

Curt. Pat. 489; Keyes *v.* Grant, 118 U. S. 25; Bischoff *v.* Wethered, 9 Wall. 812.

As the plaintiff claimed that the corporations were mere devices to protect the individual defendants, evidence showing that the defendants were acting in good faith, was admissible. — National *v.* Leland, 94 Fed. 502; 37 C. C. A. 372.

§ 407. Objections and Exceptions.

An objection to the examination of a witness should state specifically the grounds of the objection, in order that the opposite party may have the opportunity of removing it if possible. — Woodbury *v.* Keith, 101 U. S. 479; 25 L. Ed. 939.

Anson and Cole were both examined and testified, without any objection to their competency because of want of notice. Hence it is too late to object to their testimony now. Had objection been taken at the time, the answer might have been amended. — Woodbury *v.* Keith, 101 U. S. 479; 25 L. Ed. 939.

Graham *v.* Mason, 5 Fish. P. C. 6; Brown *v.* Hall, 3 Fish. P. C. 531; Phillips *v.* Paige, 24 How. 164; Roemer *v.* Simon, 95 U. S. 214.

Plaintiff waived the exception to the refusal of this court to instruct the jury to find for defendant by proceeding with the cause and interlocutory evidence. — Hunt Bros. *v.* Cassidy, 53 Fed. 257; 3 C. C. A. 525.

Railway *v.* Cummings, 106 U. S. 700; Insurance Co. *v.* Crandal, 120 U. S. 527; Robertson *v.* Perkins, 129 U. S. 236.

Inasmuch as the respondent did not make specific and clear objections at the time it should have made them, if it is intended to rely thereon, we give no weight to the general objection interposed at the close of the testimony of the witness, in the following language: "Testimony objected to, in whole and in part, as incompetent and insufficient on the issue of priority of invention." In no view of the rules relating to objections with reference to testimony produced in federal courts can one so sweeping as this have effect, unless it is apparent that the facts intended to be proved in whatever form produced, could have no weight. — Westinghouse *v.* Stanley, 133 Fed. 167; 68 C. C. A. 523.

§ 408. Parol.

Parol evidence and documentary evidence are admissible to establish the statutory defenses. — Bates *v.* Coe, 98 U. S. 31; 25 L. Ed. 68.

Oral evidence of anticipation must be regarded with grave doubt. The burden of proof rests upon the defendant and every reasonable doubt should be resolved against him. — Washburn *v.* Beat Em All, 143 U. S. 275; 36 L. Ed. 154; 12 S. Ct. 443.

Coffin *v.* Ogden, 85 U. S. 120.

Oral testimony, unsupported by patents or exhibits, tending to show prior use of a device regularly patented is, in the nature of the case, open to grave suspicion. — Deering *v.* Winona, 155 U. S. 286; 39 L. Ed. 153; 15 S. Ct. 118.

Washburn *v.* Beat Em All, 143 U. S. 275.

Granting the witnesses be of the highest character, and never so conscientious in their desire to tell only the truth, the possibility of their being mistaken as to the exact device, which though bearing a general resemblance to the one patented may differ from it in the very particular which makes it patentable, are such as to render oral testimony particularly untrustworthy; particularly so if the testimony be taken after the lapse of years from the time the anticipating device was used. If there be added to this a personal bias, or an incentive to color the testimony in the interest of the party calling the witness, to say nothing of downright perjury, its value is, of course, still more seriously impaired. This case is an apt illustration of the wisdom of the rule requiring such anticipations to be proven by evidence so cogent as to leave no reasonable doubt in the mind of the court, that the transaction occurred substantially as stated. — Deering *v.* Winona, 155 U. S. 286; 39 L. Ed. 153; 15 S. Ct. 118.

That no two of these witnesses testify as to the same plate, and that none of these old plates are produced, is urged as ground upon which we should hold the anticipation not proven. We are not unmindful of the liability to mistake in oral evidence of anticipation, and of the rule which requires that the evidence relied upon to overthrow the presumption of novelty should be of the most cogent character. Deering *v.* Winona, 155 U. S. 286; American *v.* Weston, 59 Fed. 147. Nevertheless we cannot escape the conviction that this method of making door name-plates is established as convincingly as any such fact can be established where the original article is not produced.

So far as we can see, the witnesses are without bias or incentive to color their evidence. The probability of mistake is reduced to a minimum by the very simple character of the subject about which they testify. The case is therefore quite exceptional, and, if the evidence does in fact produce conviction beyond all reasonable doubt, we are unadvised of any rule which denies to it legal effect in any class of cases, criminal or civil. — Rodwell *v.* Tuchfarber, 127 Fed. 138; 62 C. C. A. 252.

The unsatisfactory character of testimony depending upon the unaided recollection of witnesses of events occurring years previous render courts loth to destroy a patent upon testimony so unreliable. — United *v.* Beattie, 149 Fed. 736; 79 C. C. A. 442.

§ 409. Prima Facie.

The patent is prima facie proof of invention. — Marsh *v.* Seymour, 97 U. S. 348; 24 L. Ed. 963.

Plaintiff introduced his patent in evidence. This was prima facie proof of the validity of his patent. — Hunt Bros. *v.* Cassidy, 53 Fed. 257; 3 C. C. A. 525.

Mitchell *v.* Tilghman, 19 Wall. 390; Walk. Pat. Sec. 491; Blanchard *v.* Putnam, 8 Wall. 420; Seymour *v.* Osborne, 11 Wall. 576.

Counsel for the appellant insisted that, if the testimony left in the mind of the court a reasonable doubt as to complainant's priority, his client was entitled to the benefit of it. A large number of cases, both in the Supreme Court and in the circuits, hold that doctrine, nor do we propose to dispute it. If it were an open question, we might consider whether the presumption arising from the granting of the letters patent, could not be overthrown, as any other presumption at law is overthrown, by the preponderance of evidence. But accepting it as settled that any doubt is fatal to a claim antagonistic to the validity of letters patent themselves because of fraud, we can but say that in this case the principle cannot afford the appellant any assistance. The evidence is too convincing to permit the shadow of a doubt. — Forgie *v.* Oil Well. Supp. Co. 58 Fed. 871; 7 C. C. A. 551.

That the presumption of noninfringement arising from the grant of a subsequent patent is overcome by the finding of the trial court that infringement exists, see Anderson *v.* Collins, 122 Fed. 451; 58 C. C. A. 669.

§ 410. Records and Documents.

Patents are public records and as all persons are bound to take notice of their contents, they consequently have the right to obtain copies of them, by making proper application and paying the required fees. — Boyden *v.* Burke, 14 How. 575; 14 L. Ed. 548.

The application is a public record which the defendant and all others are presumed to know. — Loom Co. *v.* Higgins, 105 U. S. 580; 26 L. Ed. 1177.

A certified copy of a decision will be accepted as against the official report differing from it. — Gamewell *v.* Municipal, 77 Fed. 490; 23 C. C. A. 250.

Some mention is made of the file-wrapper; but this is of no consequence, because at every point the application for the patent was overruled by the examiners, and also on appeal until the commissioner was reached, who

reversed everything appealed against, and what is thus referred to occurred before the inventor reached him, and was wiped out. — Forsyth *v.* Garlock, 142 Fed. 461; 73 C. C. A. 577.

§ 411. Miscellaneous.

It is perfectly clear that a person having an interest only in the question and not in the event of the suit is a competent witness; and in general, the liability of a witness to a like action, or his standing in the same predicament with the party sued, if the verdict cannot be given in evidence for or against him, and does not exclude him. — Evans *v.* Eaton, 7 Wheat. 356; 5 L. Ed. 472.

The court refused to receive a disclaimer on the ground that it did not recite plaintiff's interest. Defendant later tried to introduce some paper to limit plaintiff's claim. Also refused. *Held:* That while it was error to have refused it in the first instance it was not error in the second case to which exception could be taken. — Silsby *v.* Foote, 14 How. 218; 14 L. Ed. 394.

It would seem, that the defendant may introduce a junior patent in evidence to justify what he has done with the same *prima facie* as attaches to the patent in suit. — Corning *v.* Burden, 15 How. 252; 14 L. Ed. 683.
Note: This rule is doubtful.

The defendant is not at liberty to raise and prove issues outside of the pleadings and direct the attention from the main issue. — Blanchard *v.* Putnam, 75 U. S. 420; 19 L. Ed. 433.

If the defense be that it is for a different invention, the original patent, though inoperative as a cause of action or to protect the rights of the inventor, is yet admissible in evidence to sustain or prove such a defense. — Reedy *v.* Scott, 90 U. S. 352; 23 L. Ed. 109.

The burden of proof is upon defendant when the patent is put in evidence. — Marsh *v.* Seymour, 97 U. S. 348; 24 L. Ed. 963.
Seymour *v.* Osborne, 11 Wall. 516.

Defendant did not apply for a patent until after he had seen plaintiff's drawings and had made a model therefrom. It is difficult to believe, in view of this evidence, that he did not obtain the idea of his alleged invention from the prior invention and patent of plaintiff. — Garrett *v.* Siebert, 98 U. S. 75; 25 L. Ed. 84.

Complainant's testimony as to the date of his invention should be strictly construed against him because such evidence is necessarily subject to the gravest suspicion, however honest and well intentioned the witness may be. — Clark *v.* Willimantic, 140 U. S. 481; 35 L. Ed. 521; 11 S. Ct. 846.

But while the stipulation is undoubtedly admissible in evidence it ought not to be used as a pitfall, and where the facts subsequently developed show with respect to a particular matter, that it was inadvertently signed, we think that, upon giving notice in sufficient time to prevent prejudice to the opposite party, counsel may repudiate any fact inadvertently incorporated therein. — Carnegie *v.* Cambria, 185 U. S. 403; 46 L. Ed. 968; 22 S. Ct. 698.
The Hiram, 1 Wheat. 440; Malin *v.* Kinney, 1 Cai. 117; Barry *v.* N. Y. 53 N. Y. 536.

The opinion of the witnesses as to the relative cost of two machines of which he was competent to judge, was not objectionable on the ground that he had testified that he did not know what one of them had cost. — Hunt *v.* Cassidy, 53 Fed. 257; 3 C. C. A. 525.

Counsel for complainant was justified in refusing, as he did, to cross-examine the witness who was the author of the pamphlet offered in evidence said to contain the views of the witness on the patents in suit, in regard to its contents. The greater part of it was scandalous matter, entirely irrelevant to the present controversy; and he was under no obligation to undertake to read and analyze its contents to see whether it contained anything bearing upon the issue worthy of a cross-examination. — Waterman *v.* Shipman, 55 Fed. 982; 5 C. C. A. 371.

It was incumbent upon the appellant, by fit objection at the time, or by subsequent motion to expunge, to have informed its opponent of the precise ground of objection to the offering in evidence of the former decree. The objection could then have been obviated by amendment to the bill, or by proper supplemental pleading. It is too late to urge such objection for the first time upon an appeal. — Bradley *v.* Eagle Mfg. Co. 57 Fed. 980; 6 C. C. A. 661.

Walsh *v.* Colclough, 56 Fed. 778.

The proposition (of settlement) made by the defendants was purely and simply an offer of compromise. It was not an admission of any fact involved in the litigation. If evidence of the proposition had been offered by the plaintiffs upon the trial it clearly would have been inadmissible, against the defendant's objection; for the law is well settled that the offer of settlement made by a party to a suit with a view to a compromise or an amicable adjustment of the matter in dispute is not admissible against him. — Holmes *v.* Truman, 67 Fed. 542; 14 C. C. A. 517.

9 Am. & Eng. Enc. Law, 353; Stanford *v.* Bates, 22 Vt. 546; West *v.* Smith, 101 U. S. 263; Gerrich *v.* Sweetser, 4 Pick. 374.

The oral testimony of two officials in the patent office was taken for the purpose of proving the averment in the bill that the patent was issued either fraudulently or through the gross negligence of the examiner, and was objected to. The evidence was admissible. — Ecaubert *v.* Appleton, 67 Fed. 917; 15 C. C. A. 73.

The attention of the bar of this circuit is again called to the inexpediency of allowing irrelevant matter in depositions in patent causes. — Bonsack *v.* Elliott, 69 Fed. 335; 16 C. C. A. 250.

The conduct of the complainant in harassing purchasers of the product of this process with threats of litigation, when no possible ground for an action existed against them whether the patent be valid or not (Goodyear *v.* Railroad, Fed. Cas. No. 5,563; Boyd *v.* McAlpin, id. 1748; Brown *v.* D. C. 3 Mackey, 502; 3 Rob. Pat. 927) savors of an attempt to use the process of the courts to win customers by unfair means, and thus to reap a harvest of limited duration. It does not indicate that confidence in the validity of the patent which presses to a full investigation of rights and a comprehensive and decisive conclusion. Such a course certainly does not commend the cause of a suitor to a court of equity. — American *v.* Port Huron, 72 Fed. 516; 18 C. C. A. 670.

The appellees caused it to be identified, but failed to introduce it in evidence, and when appellant desired this court to consider it in evidence the

appellees objected. They cannot therefore, take any supposed advantage from a patent which they have failed to produce in evidence, and to the consideration of which they now object. — Red Jacket *v.* Davis, 82 Fed. 432; 27 C. C. A. 204.

Statements of counsel are not evidence; nor is the court bound by their construction of a patent. — Red Jacket *v.* Davis, 82 Fed. 432; 27 C. C. A. 204.

Where both parties lumbered up the record with a mass of evidence which was wholly immaterial and unnecessary, costs may be refused the successful party. — Eastman *v.* Getz, 84 Fed. 458; 28 C. C. A. 459.

More weight is given to the testimony of a witness based upon facts within his own knowledge and experience, than to the testimony of a witness which is "largely the assertion of theory." — Overweight *v.* Improved, 94 Fed. 155; 36 C. C. A. 125.

Béné *v.* Jeantet, 129 U. S. 613; 3 Rob. Pat. sec. 1012.

We do not think the learned judge meant to maintain that the structures to which he referred were matters of which "judicial notice," as that phrase is used in our jurisprudence, could be taken. The reference seems to have been made out of the fulness of his knowledge and experience in regard to these structures and, as naturally, apposite to and illustrative of the questions discussed by counsel in the suit before him. No hint or suggestion is made by the learned judge, that the knowledge of the fact referred to by him, determined the result at which he arrived. That he freely stated the facts he had in mind, in regard to combined gravity and cable roads, tends no more to invalidate or impeach his decree than the fact that he had this knowledge, though he were silent in regard to it. Extended experience in the affairs of life, does not disqualify a judge, who does not use or seek to use it unfairly. — Thompson *v.* Chestnut, 127 Fed. 698; 62 C. C. A. 454.

The preliminary question of the title in complainants was raised by their failure to produce the assignment to them of the sole and exclusive right to the patent, as pleaded in the bill. In view of the finding of the court below that complainants' title as alleged was admitted in the court below, and the statement of counsel that the assignment as pleaded was ready to be produced in court, showing such exclusive license in complainants, we conclude that title has been sufficiently proved. — Kirchberger *v.* American, 128 Fed. 599; 64 C. C. A. 107.

That a written agreement to submit certain questions as to use under a patent to a court of competent jurisdiction is competent evidence upon the trial of such an issue, see Holmes *v.* Kirkpatrick, 133 Fed. 232; 66 C. C. A. 286.

It is true that the testimony of an inventor in derogation of the validity of his own patent is usually open to suspicion; and in a case like this, where he has made oath, for the purpose of obtaining a joint patent, that he and another inventor were the joint inventors of the subject matter, the court should reject his subsequent testimony to the contrary, unless it carries a clear conviction that he did not intend to testify falsely originally, but made oath under misapprehension or mistake. We are not aware of any rule of evidence or any principle of estoppel which precludes a witness who has testified incorrectly, or even falsely, on a former occasion, from telling the truth

later. The joint patentees might be estopped from asserting that they were not joint inventors in a suit against them by the owner to enforce the patent, but a third party, who is in no way in privity with them or with the owner, cannot be affected by an estoppel. — De Laval *v.* Vermont, 135 Fed. 772; 68 C. C. A. 474.

In the nature of the case, it was scarcely to be expected that the complainant could prove that the inventions in question were made during the term of Franzen's employment by the direct and positive testimony of any witness speaking from his own actual or personal knowledge. Naturally the complainant's reliance would be on circumstantial evidence, which often leads to a conclusion more satisfactory than direct evidence can produce. — Mississippi *v.* Franzen, 143 Fed. 501; 74 C. C. A. 135.

The complainant is not concluded by what the defendant testified, or prevented from contending upon the whole evidence that the inventions were actually made while defendant was in its employment, although he asserted the contrary when on the witness stand. A party who calls the opposite party as a witness is not bound by his testimony, but may contradict him. — Mississippi *v.* Franzen, 143 Fed. 501; 74 C. C. A. 135.

1 Whart. Ev. secs. 484, 489; Dravo *v.* Fabel, 132 U. S. 487 distinguished.

The Circuit Court, and we on appeal, proceeding on a bill in equity of this character as finders of the facts have as wide a range for drawing inferences as a jury. — United *v.* Duplessis, 155 Fed. 842; 84 C. C. A. 76.

It will thus be seen that we have nothing before us but the statements of the patent itself and the patents referred to in the specification. With these exceptions there is no prior art. We are permitted to consider the decrees in the first circuit as rules of decision entitled to the highest respect but we are not permitted to consider the facts as stated in the opinions either to sustain or defeat the patent, for the reason that these facts are not in proof here. We have nothing more before us than if the case were here on demurrer to the bill. The rules prescribing the limits beyond which the court is not permitted to go at such hearings is clearly stated in New York *v.* New Jersey, 137 U. S. 445. — American *v.* DeGrasse, 157 Fed. 660; 87 C. C. A. 260.

Whether the application under which the patent in suit was granted be called a formal continuation or not, of the original application for a patent with reference to the same subject-matter, the admissions and statements of the applicant in the former case are not irrelevant to the issues now under consideration, and we are not to be asked to close our eyes to evidential facts upon a ground so slight as the one suggested. — Dodge *v.* Jones, 159 Fed. 715; 86 C. C. A. 191.

EXPERIMENT.

§ 412. General Statement.

The Patent Statute makes no provision as to experiment or experimental use. This subject recurs under the titles *Anticipation* and *Public Use*. The following is, perhaps, the best general statement made by the courts:

The law upon the question of experimental use is well settled. It is the duty of the inventor to file his application within two years after the com-

pletion of his invention. He is permitted to take the time necessary to complete the invention and to make experiments for that purpose, but the moment the invention is completed the two-year period begins to run. The leading case is Elizabeth *v.* Pavement Co. 97 U. S. 126. An experimental public use of six years was there held not to be unreasonable. The invention was for a pavement and durability was the principal object sought to be attained. An invention must not only be new, it must be useful. A pavement that would not last six years was useless, no one would want it, no one would incur the expense of laying it down. There is but one way to ascertain whether a newly invented pavement is durable and that is to test it by public use. A trial of two years will demonstrate nothing. It may stand the test for that period and then suddenly disintegrate. These were the considerations which induced the court to uphold the Nicholson patent. As we shall presently see, there were no such problems to be solved in the case in hand.

Smith *v.* Sprague, 123 U. S. 249, is authority for the following propositions:

First. Where it is clearly shown that there was public use of an invention by the inventor for more than two years prior to the application, the burden rests upon him to establish by convincing proof that the use was for the purpose of perfecting an incomplete invention by tests and experiments.

Second. Where the invention is one of many embodied in a single machine, or where the device contains features not included in the invention covered by the claims, experiments intended to produce more perfect working of these extrinsic features are not such as will prevent the running of the statutory limitation. In other words, the experiments must be made for the purpose of developing the invention as described and claimed and nothing else. When the invention is completed the time begins to run and it is of no moment that something else, not a part of the invention, is incomplete and requires tests and experiments to perfect it. (Citing and explaining Egbert *v.* Lippman, 104 U. S. 333; Root *v.* Railroad, 146 U. S. 210; Worley *v.* Tobacco, 104 U. S. 340; Perkins *v.* Paper, 2 Fed. 451; Hall *v.* Macneale, 107 U. S. 90; Harmon *v.* Struthers, 57 Fed. 637; Swain *v.* Holyoke, 109 Fed. 154; Lettelier *v.* Mann, 91 Fed. 917.)

From these authorities we deduce the following propositions, as applicable to the present controversy:

1. An inventor has a reasonable time in which to experiment for the purpose of perfecting the invention and demonstrating its utility.

2. The time thus spent, if in good faith, is no part of the two-year statute of limitations.

3. The experiments must be made in perfecting the invention as described and shown.

4. Experiments made in testing parts of the machine not covered by the invention will not have the effect of extending the two-year period.

5. As soon as the invention is completed, viz.: "in such a condition that the inventor can apply for a patent for it," the two-year period begins to run and the application must be made within this period.

6. The fact that the invention has been improved since its original embodiment does not demonstrate that it was then embryonic or incomplete.

7. When a clear case of prior public use is established, the burden is on the inventor to prove by convincing proof that the use was experimental. — Eastman *v.* Mayor, 134 Fed. 844; 69 C. C. A. 628.

§ 413. Abandonment.

The use of an invention, by the inventor himself, or of any other person under his direction, by way of experiment, and in order to bring his invention

to perfection has never been regarded as abandonment. — Elizabeth *v.* American, 97 U. S. 126; 24 L. Ed. 1000.

Curt. Pat. 381; Shaw *v.* Cooper, 7 Pet. 292.

A machine which has been in use, unchanged in the principle of its construction, for some 30 years, until it was taken from the shop to be made an exhibit in suit, cannot be thrown aside as an abandoned experiment. — Woodbury *v.* Keith, 101 U. S. 479; 25 L. Ed. 939.

It is only when experiments fall short of the desired result and are abandoned as failures that they are rejected as proof of want of novelty. — American *v.* Wagner, 151 Fed. 576; 81 C. C. A. 120.

Waterman *v.* Thomson, 2 Fish. P. C. 461; Aikin *v.* Dolan, 3 Fish. P. C. 197.

§ 414. Experimental Use.

A machine need not be put up and used only in the inventor's own shop or premises. He may have it put up and used in the premises of another, and the use may inure to the benefit of the owner of the establishment. Still, if used under the surveillance of the inventor, and for the purpose of enabling him to test the machine and ascertain whether it will answer the purpose intended, and make such alterations and improvements as experience demonstrates to be necessary, it will be a mere experimental use and not a public use, within the meaning of the statute. — Elizabeth *v.* American, 97 U. S. 126; 24 L. Ed. 1000.

It is not experimental use where an inventor practises his art generally, teaching it to others and receiving pay therefor. — International *v.* Gaylord, 140 U. S. 55; 35 L. Ed. 347; 11 S. Ct. 716.

Smith *v.* Sprague, 123 U. S. 249; Consolidated *v.* Wright, 94 U. S. 92; Egbert *v.* Lippman, 104 U. S. 333; Elizabeth *v.* Nicholson, 97 U. S. 126.

We are convinced that, while the product of the Rieseck machine was sold, such sale was incidental to its experimental use. — Penn *v.* Conroy, 159 Fed. 943; 87 C. C. A. 149.

§ 415. Public Use.

The rule of Coffin *v.* Ogden, 18 Wall. 120 and Egbert *v.* Lippman, 104 U. S. 333 followed. — Hall *v.* Macneale, 107 U. S. 90; 27 L. Ed. 367; 2 S. Ct. 73.

If it be once understood that the object of the act "was to require the inventor to see to it that he filed his application within two years from the completion of his invention, so as to cut off all question of the defeat of his patent by a use or sale of it by others more than two years prior to his application," the courts will no longer be vexed by the perplexing questions which must frequently arise when the intent of the user and the bona fides of the use are questions to be determined on oral testimony. Isolated cases of injustice to inventors may result, but the remedy is certain and sure. The inventor is master of the situation and has it in his power by prompt action to make the defense of prior public use impossible. Surely two years after he has completed his invention is ample time in which to file his application. If he fails to take so simple and reasonable a precaution, why should it not be said that the risk is his and that he cannot complain of the consequences of his own supineness? — Eastman *v.* Mayor, 134 Fed. 844; 69 C. C. A. 628.

§ 416. Reduction to Practice.

A mere experiment is not patentable. It must have been reduced to practice. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

What constitutes legitimate experiment. — Smith *v.* Sprague, 123 U. S. 249; 30 L. Ed. 141; 8 S. Ct. 122.

Putting an invention into public use for more than two years merely to test its efficiency, is not reduction to practice within the meaning of the cases. — Root *v.* Third Ave. 146 U. S. 210; 36 L. Ed. 946; 13 S. Ct. 100.

Elizabeth *v.* Nicholson, 97 U. S. 126; Smith *v.* Sprague, 123 U. S. 249; Hall *v.* Macneale, 107 U. S. 90; Egbert *v.* Lippman, 104 U. S. 333.

§ 417. Secret Use.

The machine was kept under lock and key, hidden from sight, and no employees permitted to see it except the foreman. *Held:* Whatever knowledge, if any, was obtained of the machine by the public was surreptitious and contrary to the manifest wish of the inventor. — Penn *v.* Conroy, 159 Fed. 943; 87 C. C. A. 149.

Elizabeth *v.* Pavement, 97 U. S. 126; Jennings *v.* Pierce, Fed. Cas. 7283; Smith *v.* Sprague, 123 U. S. 249.

EXTENSIONS.

§ 418. General Statement and Holdings.

Extensions have for long years been obsolete. They can be secured only by special act of Congress (see § 268). The following rulings are given, not because they are of any practical use, but to make the record of cases complete.

In absence of specific agreement the assignee takes no interest in an extension. — Wilson *v.* Rousseau, 4 How. 646; 11 L. Ed. 1141.

The executor or administrator and not a former assignee, has the right to apply for an extension. — Wilson *v.* Rousseau, 4 How. 646; 11 L. Ed. 1141.

1 — The act authorizes an extension on the application of an executor or administrator.

2 — The right of extension inures to the executor or administrator, and not to an assignee.

3 — That such right inures to the administrator notwithstanding a contract of assignment of the existing patent.

4 — That one claiming the title from administrator under extension may maintain an action against the assignees of the former patent.

5 — That the fact that the patentee in his life time had sold all his rights, receiving no contingent interest in the patent, did not permit the executor or administrator from obtaining extension and that such former assignees acquired no rights beyond the original term.

6 — That an assignee of a specific territory, limited to use two machines holds such an interest as will enable him to sue.

7 — That the extended specification is not void for uncertainty.

8 — That the decision of the Commissioners is not conclusive as to their jurisdiction.

9 — That a reissue of an extended patent is lawful. — Wilson *v.* Rousseau, 4 How. 646; 11 L. Ed. 1141.

Upon the authority of Evans *v.* Eaton and Wilson *v.* Rousseau, two propositions are settled: 1. That a special act of Congress in favor of a patentee,

extending the time beyond that originally limited, must be considered as engrafted on the general law. 2. That under the general law, in force when this special act was passed, a party who had purchased the right to use a machine during the period to which the patent was first limited, was entitled to continue to use it during the extension authorized by law. — Bloomer *v.* McQueewan, 14 How. 539; 14 L. Ed. 532.

Evans *v.* Eaton, 3 Wheat. 518; Wilson *v.* Rousseau, 4 How. 688.

Under the former law when extensions were granted, unless special agreement ran to the contrary, the sale or license of a machine carried with it the right under an extension. — Mitchell *v.* Hawley, 83 U. S. 544; 21 L. Ed. 322.

Under the Act of 1836 a license or assignment carried with it the right under the extension of the patent. — Eunson *v.* Dodge, 85 U. S. 414; 21 L. Ed. 766.

Wilson *v.* Rousseau, 4 How. 646; Bloomer *v.* McQueewan, 14 How. 539; Chafee *v.* Belting Co. 22 How. 217; Bloomer *v.* Millinger, 1 Wall. 340.

In the absence of specific terms, an assignment does not carry extensions — on the principle that Nemo dat non habet (Benj. Sales, 2nd ed. 5; Peer *v.* Humphrey, 2 Ad. & Ell. 495); but where the conveyance is of the invention whether before or after the patent is obtained the rule is otherwise, unless there is something in the instrument to indicate a different intention. The rule being that a conveyance of the described invention carries with it all its incidents, and all the well considered authorities concur that the inchoate right to obtain a renewal or extension of the patent is as much an incident of the invention as the inchoate right to obtain the original patent; and if so it follows that both are included in the instrument which conveys the described invention without limitation or qualification. — Hendrie *v.* Sayles, 98 U. S. 546; 25 L. Ed. 176.

Emmons *v.* Sladden, 9 O. G. 354; Gayler *v.* Wilder, 10 How. 477; Clum *v.* Brewer, 2 Curt. 520; Carnan *v.* Bowles, 2 Bro. Ch. 84.

The right of an owner of a patented machine, without any conditions attached to his ownership, to continue the use of his machine during an extended term of the patent is well settled. — Paper Bag cases, 105 U. S. 766; 26 L. Ed. 959.

Bloomer *v.* McQueewan, 14 How, 550; Chaffee *v.* Boston, 63 U. S. 223; Mitchell *v.* Hawley, 83 U. S. 54[illegible], Adams *v.* Burks, 84 U. S. 455.

FOREIGN PATENT.

§ 419. Statutory Provision.

No person otherwise entitled thereto shall be debarred from receiving a patent for his invention or discovery. nor shall any patent be declared invalid by reason of its having been first patented or caused to be patented by the inventor or his legal representatives or assigns in a foreign country, unless the application for said foreign patent was filed more than twelve months, in cases within the provisions of section 4886 R. S., and four months in cases of designs, prior to the filing of the application in this country, in which case no patent shall be granted in this country.

An application for patent for an invention or discovery or for a design filed in this country by any person who has previously regularly filed an application for a patent for the same invention, discovery, or design in a foreign country which, by treaty, convention, or law, affords similar privileges to citizens of the United States shall have the same force and effect as the same application would have had if filed in this country on the date on which application for patent for the same invention, discovery, or design was first filed in such foreign country, provided the application in this country was filed within twelve months in cases within the provisions of section 4886 of the Revised Statutes, and within four months in cases of designs, from the earliest date on which any such foreign application was filed. But no patent shall be granted on an application for patent for an invention or discovery or a design which had been patented or described in a printed publication in this or any foreign country more than two years before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country for more than two years prior to such filing. — R. S. 4887.

The foregoing is the statute as twice amended — first by the act of Mar. 3, 1897, and second by the act of Mar. 3, 1903. In order to understand the force and effect of the decisions on this subject, it is necessary to quote the section as originally found in the act of July 8, 1870, and also as amended by the act of Mar. 3, 1897.

As originally passed:

No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years.

After the amendment of Mar. 3, 1897, the section read thus:

No person otherwise entitled thereto shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented by the inventor or his legal representatives or assigns in a foreign country, unless the application for said foreign patent was filed more than seven months prior to the filing of the application in this country, in which case no patent shall be granted in this country.

It is well, also, to have before us the text of Sec. 4886, showing the amendments of Mar. 3, 1897. The amendments are shown in italics:

Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements thereof, not known or used by others in this country, *before his invention or discovery thereof*, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, *or more than two years prior to his application*, and not in public use or on sale in this country for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law, and other due proceeding had, obtain a patent therefor.

It will thus be seen that Sec. 4887 has had a somewhat varied career. The decisions following must be read with this in view.

§ 420. General Rulings.

A patent granted subsequent to a foreign patent for the same invention, is limited thereby under sec. 4887 to the term for which the foreign patent is granted, and the word "term" is meant to cover the full period of the foreign grant, without reference to the "terms" for which the patent may be extended, as construed in Pohl *v.* Anchor, 134 U. S. 381. — Bate *v.* Hammond, 129 U. S. 151; 32 L. Ed. 645; 9 S. Ct. 225.

Under 4887 U. S. R. S. a patent expires with the term of the shortest prior foreign patent, the expiration of term meaning the term for which such foreign patent was granted, or could be kept in force. Construing Bate *v.* Hammond, 129 U. S. 151; Pohl *v.* Anchor, 134 U. S. 381; 33 L. Ed. 953; 10 S. Ct. 577.

Holmes *v.* Metropolitan, 21 F. R. 458; Paillard *v.* Bruno, 29 F. R. 864; Bate *v.* Gillett, 31 F. R. 809; Huber *v.* Nelson, 38 Fed. 830.

The expiration of a foreign patent prior to application for a reissue voids the reissue. — Commercial *v.* Fairbank, 135 U. S. 176; 34 L. Ed. 88; 10 S. Ct. 972.

Voids grant of domestic patent issued after expiration of foreign patent. — Huber *v.* Nelson, 148 U. S. 270; 37 L. Ed. 447; 13 S. Ct. 603.

Bate *v.* Hammond, 129 U. S. 151.

Does not operate to terminate domestic patent if the term for which the foreign patent is undisturbed. — Huber *v.* Nelson, 148 U. S. 270; 37 L. Ed. 447; 13 S. Ct. 603.

Pohl *v.* Brewing Co. 134 U. S. 385.

Under the facts stated (that the American application was filed Dec. 1, 1876; that English patent was issued Jan. 29, 1877; that Canadian patent was issued Jan. 9, 1877; that the American patent was issued Nov. 20, 1877) the invention for which the U. S. patent was issued was "previously patented in a foreign country," within the meaning of those words in sec. 4887 U. S. R. S. and the U. S. patent expired under the terms of that section, before the expiration of seventeen years from its date. — Bate *v.* Sulzberger, 157 U. S. 1; 39 L. Ed. 601; 15 S. Ct. 508.

Compare Bate *v.* Hammond, 129 U. S. 151.

Full statement of present status of sec. 4887.

The French patent for a term of 15 years was issued before the date of the application for the United States patent, and was in full force at that date, but lapsed for the nonpayment of an annuity before the U. S. patent issued. The effect which the lapse had upon the life of the U. S. patent depends upon the proper construction of sec. 4887.

No one of the five decisions of the Supreme Court which may be supposed to bear upon a decision of this motion was based upon the facts in this case. All the decisions of the Supreme Court upon sec. 4887 were intended to be limited to the question which arose upon the precise facts of the respective cases, and are to be so regarded, notwithstanding any general language which was used.

In Bate *v.* Hammond, 129 U. S. 151, the question was whether the U. S. patent expired at the end of 5 years or 15 years, from the date of the previously issued Canadian patent; and it was held that as there was no interruption of the Canadian patent, 15 year period prevailed.

In Pohl *v.* Brewing Co. 134 U. S. 381, the court held that the potential term and not the period of actual existence, was to govern.

In Commercial *v.* Fairbank, 135 U. S. 176, the great question was whether the foreign patents were identical with those of the United States, and finding them to be so, held that the application for the reissue filed subsequent to the expiration of a foreign patent was void.

The decision of Bate *v.* Sulzberger, 157 U. S. 1, was confined to the single point that the provisions of sec. 4887 " refer to foreign patents granted previously to the issue of letters patent for the same invention by the United States, and not to foreign patents granted previously to the application for the American letters."

The case of Huber *v.* Mfg. Co., 148 U. S. 270, was tried in circuit court after the decision in the Bate case and before that in the Pohl case. In this case, the application for the U. S. patent was filed more than 7 months after the English patent had become void. *Held:* " We are of opinion that, as in the case at bar, the foreign patent was not in force when the U. S. patent was issued, the latter patent never had any force or validity; " and gave as the apparent reason for the conclusion that " the delay in applying for the U. S. patent until after the foreign patent expired amounted to an abandonment of the right to a U. S. patent. This is in accordance with Mushet's Case " (1870) which was an application for an extension of a U. S. patent after the foreign patent for the same invention had expired. The Huber case is an authority only for the right to obtain a U. S. patent applied for 7 months after a foreign patent had expired, and after its owners manifestly regarded it as of no importance and consequently after the abandonment of the right to a U. S. patent. There has been no authoritative decision by that court upon the facts of the case at bar.

Section 4887 provided that prior foreign patenting should not be a bar to a United States patent, unless under certain circumstances, but that such patent should not extend beyond the term of the life of its foreign predecessor. If the invention or the right to a patent had been abandoned before the application for a United States patent, its issuance was prohibited under another section. If there had been no abandonment before application, but the issuance of the United States patent was delayed until the foreign patent had become forfeited by noncompliance with some statutory provision, the question is, whether when issued, its life had been destroyed, or whether its life was upon the declared or legal term of the foreign patent. If its life was destroyed, its destruction was effected while the application was under examination, and was delayed in the patent office. Such a result would be at variance with the spirit of the section, the intent of which was to make the United States term coterminous with the possible foreign term.

But there is no requirement that the foreign patent must be in force at the date of the United States patent, and in searching for the meaning of the section, as applied to this case, the words " to expire at the same time " should have the same construction in each set of circumstances, and should be taken to mean that the United States patent expires at the end of the term prescribed in the previous foreign patent. — Welsbach *v.* Apollo, 96 Fed. 332; 37 C. C. A. 508.

Note: Perhaps this decision should set at rest the wandering and disembodied spirit of sec. 4887. The opinion is by Wallace and concurred in by Shipman (only two judges sitting), and the briefs were by Bennett for appellant and Wetmore for appellees. While other conditions may arise, it would seem that thus far the law should remain settled.

The following opinion by Judge Lowell is given, practically in full.

At the time the patent in suit was issued, section 4887 of the Revised Statutes was in force in its original form. By virtue of that section the patent

was limited to expire with the British patent, May 19, 1897. The complainant contended that since the passage of Act Mar. 3, 1903, c. 1019, 32 Stat. 1225, every patent whenever granted is limited only by the term expressed in its grant and is governed by Rev. St. sec. 4884. Under this contention the patent expired May 24, 1904. In order to understand the legislation under consideration it is here printed in full. (Here is quoted sec. 4887; Act Mar. 3, 1897, c. 391, 29 Stat. 692; Act Mar. 3, 1903, c. 1019, sec. 1, 32 Stat. 1225, above quoted.)

Let us consider how the law stood regarding patents like that here in suit at every stage of the legislation, bearing in mind the necessary distinction between the validity of a patent and its term. Act July 4, 1836, c. 357, sec. 8, 5 Stat. 121, provided that prior foreign patenting within six months of the application here should not invalidate the domestic patent, which was left in force as expressed on its face. Act Mar. 3, 1839, c. 89, sec. 6, 5 Stat. 354, did not affect patents validated by the act of 1836, but, in addition thereto, validated American patents for inventions which had been patented abroad more than six months before the application here. It first gave to foreign patenting an effect upon the term of an American patent for the same invention by reckoning the statutory term of the American patent from the foreign rather than from the American issue. The general codification of the patent laws in Act July 8, 1870, c. 230, 16 Stat. 201, materially changed the effect given to foreign patenting, and in this respect did not merely codify existing legislation. Bate *v.* Sulzberger, 157 U. S. 1, 41. The American patent was made to expire with the foreign patent of shortest term, and not at the usual statutory period reckoned from the date of the foreign application. The provisions of sec. 25 of the Act of 1870 were substantially like those of Rev. Stat. 4887. The latter was expressed in two sentences. In substantial accordance with the acts of 1836 and 1839 as amended by the Act of 1870, the first sentence declared that no patent should be deemed invalid because of prior foreign patenting. This sentence dealt with validity as affected by foreign patenting and with that subject only. The second sentence dealt with the term of American patent as affected by prior foreign patenting, and not at all with its validity, carrying out the radical alteration of the term which was introduced by the Act of 1870.

When granted, the patent in suit fell within the purview of both sentences of section 4887. The first saved it from invalidation by the prior British patenting. The second limited its term by that of the British patent; i. e., May 19, 1897. Had the legislation remained unchanged to the present day the defense to this bill would undoubtedly be complete.

The Act of Mar. 3, 1897, was passed before the expiration of the patent in suit. Section 3 amended both sentences of Rev. Stat. 4887. The only important amendment to the first sentence invalidated American patents where the foreign application was filed more than seven months before the American application. The second sentence of sec. 4887 was stricken out altogether. As thus amended, sec. 4887 dealt solely with the invalidation of patents by reason of foreign patenting, and in no way affected their term. As no legislation remained to give to prior patenting any effect upon the term of an American patent for the same invention, that term stood as fixed by the grant issued under Rev. Stat. 4884.

In order to save earlier patents from the operation of the Act of 1897 as to their term or validity, section 8 expressly provided that the amendment of Rev. Stat. sec. 4887 should not apply to patents granted before Jan. 1, 1898. These were left to be governed by section 4887 in its original form. Therefore the patent in suit was left by the Act of 1897 unaffected either as to its validity or as to its term, governed as to the latter by the second clause of sec. 4887, and not by sec. 4884. By this saving of rights, some patents were left valid which would have been invalidated had the Act of

1897 been made retroactive; e. g., cases in which the foreign patent had been applied for more than seven months before the domestic application. Other patents were left invalid which would have been validated had the Act of 1897 been made retroactive; e. g., cases in which the American patent had expired by reason of the expiration of the British patent. The general saving of rights to individuals and to the public made by sec. 8 applied alike to both cases. The patent in suit therefore, expired May 19, 1897, as it would have done had the Act of 1897 never been passed.

The Act of 1903 amended sec. 4887 as amended. It did not purport to affect the term of patents in any respect, but only the requisites of their validity. Before its passage, as has just been said, the patent in suit was controlled as to its term by sec. 4887 in its original form. The Act of 1903 manifested no intention to change this control, or in effect to revive a patent which had expired six years before its passage. Complainant has referred to statutes which repealed earlier legislation imposing penalties or working forfeitures. These repealing statutes have often been given a retroactive effect. But the second sentence of Rev. Stat. 4887, imposed no penalty, and worked no forfeiture. Moreover, the case does not stand as if the second sentence of Rev. Stat. 4887 had been repealed without qualification. Legislation will not easily be construed to destroy by mere implication rights expressly saved to the public or to individuals in earlier legislation from its retroactive operation. As the Act of 1897 expressly left the patent in suit to expire in 1897, and as the Act of 1903 manifested no contrary intention, it follows that the Sherman patent expired before this suit was brought. — Sawyer *v.* Carpenter, 143 Fed. 976; 75 C. C. A. 162.

The patent laws of the different countries vary so much in the extent of the grant provided for, and the limitations placed upon it, that to sustain complainant's proposition would lead to holding that few, if any, of the foreign patents could be included in the terms of section 4887. The words "previously patented in a foreign country," must then be taken to mean "patented according to the laws and usages of such foreign country," provided a substantial monopoly is thereby granted. None of the cases cited by the complainant, all of which have been examined, sustains its contention in this respect. Even the recent case of Societe *v.* General Electric Co. 97 Fed. 604, so much relied upon by complainant, does not, on the precise point determined upon the facts of the case, justify such an interpretation of the meaning of the act in question. It is true, the learned judge in that case said, "A patent implies a grant from the sovereign power, securing to the inventor, for a limited time, the exclusive right to make, use, and vend the invention." If he meant by this that there could be no patent in a foreign country, within the meaning of section 4887, that was not covered by the precise language of this definition, we must hold, not only that the statement was obiter dictum, but inaccurate. We are inclined to think, however, that the learned judge in using the words "make, use and vend," had in mind merely the statutory terms of the grant contained in an American patent, which were sufficient for his then purpose, inasmuch as he decided that in the case before him the Swiss government had granted no patent at all, because the condition required by the Swiss law had not been complied with, and the instrument claimed to be a patent was merely a temporary protection, with a promise that a definitive patent would be granted when the condition prescribed was fulfilled. The conclusion arrived at by the court upon the facts stated was correct, and the reasoning of the court upon those facts was clear and convincing. — Atlas *v.* Simonds, 102 Fed. 643; 42 C. C. A. 398.

§ 421. Expiration of.

A patent granted subsequent to a foreign patent for the same invention is limited thereby under sec. 4887 to the term for which the foreign patent

is granted, and the word "term" is meant to cover the full period of the former patent without reference to the "terms" for which the patent may be extended. As construed in Pohl *v.* Anchor, 134 U. S. 381. — Bate *v.* Hammond, 129 U. S. 151; 32 L. Ed. 645; 9 S. Ct. 225.

A patent shall be so limited as to expire at the same time with the term limited by the foreign patent of prior issue having the shortest time to run; and the word "term" is not subject to any lapse or forfeiture of the foreign patent. Construing, Bate *v.* Hammond, 129 U. S. 151. — Pohl *v.* Anchor, 134 U. S. 381; 33 L. Ed. 953; 10 S. Ct. 577.

Holmes *v.* Metropolitan, 21 F. R. 458; Paillard *v.* Bruno, 29 F. R. 864; Bate *v.* Gillett, 31 F. R. 809; Huber *v.* Nelson, 38 F. R. 830.

"If your invention has not been introduced into public use in the United States for more than two years, you may, upon complying with the conditions prescribed, obtain an American patent, and you may, if you can, obtain a foreign patent. But the American patent will be granted on the condition that if you obtain the foreign patent first, your invention shall be free to the American people whenever by the expiration of the foreign patent it becomes free to people abroad; and in no case shall the term of the American patent exceed seventeen years." This we deem to be a sound interpretation of the statute, giving to the words used the meaning required by their ordinary signification. — Bate *v.* Sulzberger, 157 U. S. 1; 39 L. Ed. 601; 15 S. Ct. 508.

It would seem that the main question in this case, namely, whether the invention for which the patent from the U. S. was issued had been previously patented in a foreign country, within the meaning of those words in sec. 4887 of the R. S. and whether the American patent expired under the terms of that section before the expiration of the seventeen years from its date, was squarely before the Supreme Court in the case of Bate *v.* Hammond, 129 U. S. 151, involving the same patent; but that the court declined to decide it. Such was the statement of counsel in this case; and the court acquiesced therein by neither referring to such statement nor citing that case in this opinion. It follows, therefore, that Bate *v.* Hammond supra, did not decide the question herein determined, although such interpretation has been put upon it by inexperienced or careless annotators and digesters. — Bate *v.* Sulzberger, 157 U. S. 1; 39 L. Ed. 601; 15 S. Ct. 508.

In Bate *v.* Hammond, 129 U. S. 164, it was held that, so far as the term of a Canadian statute operated to curtail the term of the United States patent under 4887 R. S. it should be regarded as a continuous term for the entire period. — Edison *v.* U. S. 52 Fed. 300; 3 C. C. A. 83.

The failure to limit the patent in suit on its face, to a shorter term than 17 years, so as to expire at the same time with the prior foreign patent having the shortest term, does not affect its validity. — Edison *v.* U. S. 52 Fed. 300; 3 C. C. A. 83.

Bate *v.* Hammond, 129 U. S. 151.

It was argued that as a Swedish patent had lapsed under failure to comply with the statute, under the Canadian act the short term patent could not be extended so as to come within Bate *v.* Hammond, 129 U. S. 164. *Held:* That the Canadian act applied only to foreign patents existing prior to the Canadian patent; and, therefore, that neither directly (Pohl *v.* Brewing Co. 134 U. S. 381) nor indirectly, through the Canadian patent, is the patent in

suit affected by what happened to the Swedish patent. — Edison *v.* U. S. 52 Fed. 300; 3 C. C. A. 83.

It will be observed that this section (4887) while it extended the right of a foreign inventor and patentee, as it existed under the acts 1836 and 1839, in regard to the limitation by a two-years public use, on the other hand, changed, in the interest of the American public, the term for which such foreign patentee could obtain a patent in the United States from 14 years from the date of the foreign patent to a period to be measured by the shortest term of the foreign patents previously obtained. This limitation of the term of the monopoly of an American patent, where the patentee has previously obtained a foreign patent, is obviously in the interest of those from whom tribute is exacted by such monopoly; and this purpose to do justice to the American public, by giving them the same privilege as is accorded to the people of the foreign country in which the patent is first granted, challenges the consideration of the Court. — Atlas *v.* Simonds, 102 Fed. 643; 42 C. C. A. 393.

That there was no patent law, in the sense of a legislative enactment, in Denmark, until 1894, does not affect the situation. Prior to the enactment of the law of that year, patents or enerets were granted and issued by the king, in exercise of the royal prerogative, and the term for which they were granted was determined according to what seemed the exigency of each case. Nevertheless such patents were issued by virtue of the recognized lawful authority vested in the reigning monarch, and were acts of a reigning sovereignty as completely as were legislative enactments. — Atlas *v.* Simonds, 102 Fed. 643; 42 C. C. A. 398.

That sec. 4887, before it was amended, and as construed in Bate *v.* Sulzberger, 157 U. S. 1, was sufficiently drastic to warrant a strict construction; and that the question of identity between the foreign patent and the domestic patent depends upon the claim of the domestic patent, and not upon the disclosure of the foreign patent, see Westinghouse *v.* Stanley, 138 Fed. 823; 71 C. C. A. 189.

Commercial *v.* Fairbank, 135 U. S. 176; Rob. on Pat. sec. 623. Criticising Walker on Pat. (4 Ed.) 150. Distinguishing Siemens *v.* Sellers, 123 U. S. 276. See also Sawyer *v.* Carpenter, 133 Fed. 238.

If differences could be set up to defeat the application of sec. 4887 of the R. S., even when they involve no patentable invention, the statute would have been emasculated, and the application could always have been defeated, by trivial and unimportant changes, so that it would be left practically worthless. In Westinghouse *v.* Stanley, 138 Fed. 823, we rested on the fact that the differences between the foreign patent and the domestic patent then in question involved "an essential, novel, and patentable improvement." We were not then required to rule directly on the question pressed on us here. If it had been pressed we would probably have perused Siemens *v.* Sellers, 123 U. S. 276, farther than we did. It was there said at page 283 "a patent cannot be exempted from the operation of the law (sec. 4887) by adding some new improvement to the invention." No mere changes in detail which do not affect the essence of the invention as covered by the respective patents can avail this complainant. — Thomson-Houston *v.* McLean, 153 Fed. 883; 82 C. C. A. 629.

§ 422. Lapse of.

A patent shall be so limited as to expire at the same time with the term limited by the foreign patent of prior issue having the shortest time to run,

and the word " term " is not subject to any lapse or forfeiture of the foreign patent. Construing, Bate *v.* Hammond, 129 U. S. 151. — Pohl *v.* Anchor, 134 U. S. 381; 33 L. Ed. 953; 10 S. Ct. 577.

Holmes *v.* Metropolitan, 21 F. R. 458; Paillard *v.* Bruno, 29 F. R. 864; Bate *v.* Gillett, 31 F. R. 809; Huber *v.* Nelson, 38 F. R. 830.

Nor do we find it necessary to express an opinion whether the lapsing of a foreign patent by the failure of a patentee to pay a renewal fee required by the British law would shorten the term of his patent here. — Hobbs *v.* Beach, 180 U. S. 383; 45 L. Ed. 586; 21 S. Ct. 409.

Bate *v.* Hammond, 129 U. S. 151; Pohl *v.* Anchor, 134 U. S. 381; Bate *v.* Sulzberger, 157 U. S. 36.

§ 423. Prior.

Neither of the English inventions are shown by the testimony to have been patented until after Morse's application for a patent, nor to have been so described in any previous publication as to embrace any substantial part of his invention. And if his application for a patent was made under such circumstances, the patent is good, even if in point of fact he was not the first inventor. — O'Reilly *v.* Morse, 15 How. 62; 14 L. Ed. 601.

By the Act of 1870, a foreign patent, in order to invalidate an American patent, must antedate the invention patented. — Cochrane *v.* Deener, 94 U. S. 780; 24 L. Ed. 139.

Under the law prior to the act of 1870 the issue of a prior foreign patent carried the issue date of the American patent back to it. — Siemens *v.* Sellers 123 U. S. 276; 31 L. Ed. 153; 8 S. Ct. 117.

It is true that by Rev. Stat. sec. 4887, " every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent; " but this obviously presupposes that the foreign patent shall have been obtained by the American patentee or with his consent. This is evident from the somewhat awkward phraseology of the 1st clause of the section, which declares that " no person shall be debarred from receiving a patent for his invention . . . by reason of its having been first patented or caused to be patented in a foreign country," which evidently means that the patentee shall not be debarred from his patent by reason of his having first patented, or caused his invention to be patented in a foreign country. Indeed it would be manifestly unjust that a patentee should lose the full fruit of his patent by the fact that some intermeddler had caused the invention to be patented abroad, that we could not give that construction to the section unless its phraseology imperatively demanded it. This construction would suggest an excellent device for an enemy to bring about the termination of an inconvenient patent. — Hobbs *v.* Beach, 180 U. S. 383; 45 L. Ed. 586; 21 S. Ct. 409.

§ 424. Miscellaneous Holdings.

The effect of a foreign patent of a different date is to limit the duration of the American patent, not to invalidate it. — O'Reilly *v.* Morse, 15 How. 62; 14 L. Ed. 601.

The fact that the domestic patent does not bear the same date as a foreign patent does not render the domestic patent void, although the foreign patent limits its duration. — Telephone Cases, 126 U. S. 1; 31 L. Ed. 863; 8 S. Ct. 778.

O'Reilly *v.* Morse, 56 U. S. 62; Siemens *v.* Sellers, 123 U. S. 276.

The preamble of complainant's patent contains a recital of several foreign patents which were taken out for the same invention. (And in the oath it is shown the same recital is made.) This recital is erroneous in several particulars, but the record fails to show that there was any intentional misrepresentation. So far as we can discover, the requirement of a reference to foreign patents in the preamble of an application, is a mere regulation of the patent office, which is so far reasonable that it may bar the issue of a patent until it is complied with, but which cannot invalidate a patent once issued unless perhaps when the recital is erroneous through a wilful misrepresentation or some fraudulent purpose. — Heap *v.* Tremont, 82 Fed. 449; 27 C. C. A. 316.

Note: It is a question if the statement were contained in the oath and were false, whether it would not amount to a false oath which could defeat the patent.

The true meaning and purpose of the act of Congress, as expressed in the language used, are accomplished by applying the word " patented " to the having received the grant of an exclusive privilege from a foreign sovereign, if such privilege amounts to a substantial monopoly. The contention of appellant is that, inasmuch as, under our present patent laws, the exclusive privilege granted to an inventor is to " make, use, and vend " his invention, the words " patented in a foreign country " can only refer to an exclusive privilege to this full extent, and are therefore not applicable to the privilege granted by the Danish patent or eneret, which is only " to make and allow to make " the thing invented. In our opinion this contention is not tenable. The Danish word " eneret," according to the Danish expert and patent solicitor produced as a witness by complainant, means " monopoly." There can be no question that the exclusive privilege to make and permit others to make is a substantial monopoly, and within the meaning of the language employed in section 4887. — Atlas *v.* Simonds, 102 Fed. 643; 42 C. C. A. 398.

The complainant maintains that the British patent was taken out by an intermeddler (the evidence was that simultaneous patenting was ordered, but that the parties whether authorized or not acted otherwise). There is no evidence that the inventor, or whoever controlled the invention, ever repudiated the British patent until after this suit was commenced, or attempted to do so. As he, whoever he was, knew that there was to be an application for a British patent, and that there was a purpose to take it out, it is beyond reasonable probability to assume that he never informed himself as to the issue of such a patent. On the other hand, the Circuit Court, and we, are entitled to assume that he obtained knowledge of what was done and acquiesced therein, an hypothesis which would reject the conclusion of the Circuit Court in this respect, to the effect that the British patent was properly taken out, would be unreasonable. — United *v.* Duplessis, 155 Fed. 842; 84 C. C. A. 76.

FRAUD.

Statute and General Statement § 425 | *See — Defenses* §§ 317, 318.

§ 425. Statute and General Statement.

It will be noted that the first and second statutory defenses under Sec. 4920 suggest the question of fraud — the first defense, fraud against the public, and the second, fraud against another inventor. The question of fraud has also arisen in connection with actions to cancel patents (see title *Cancellation of Patent*); but the question of fraud has not entered largely into the subject of patent litigation, as will be seen from the following meagre quotations.

It seems to us that if Bell was aware, at the time that he filed his specifications, asserted his claims, and procured his patents, that the same matter had been previously discovered and put into operation by other persons, he was guilty of such a fraud upon the public that the monopoly which these patents grant to him ought to be revoked and annulled. — U. S. *v.* Am. Bell, 128 U. S. 315; 32 L. Ed. 450; 9 S. Ct. 90.

While equity will always relieve those who suffer from acts of fraud, it has always been required that those who seek its jurisdiction on that account shall, after having carefully scrutinized the cause of complaint, more clearly formulate the allegations of the same, and then that they shall fully prove that which they have so alleged. — Dashiell *v.* Grosvenor, 66 Fed. 334; 13 C. C. A. 593.

Montesquieu *v.* Sandys, 18 Ves. 302; Price *v.* Berrington, 7 Eng. Law. & Eq. 260; Wilde *v.* Gibson, 1 H. L. Cas. 620; Glasscott *v.* Lang, 2 Phil. Ch. 310; Curson *v.* Belworthy, 22 Eng. Law. & Eg. 1; Tillinghast *v.* Champlain, 4 R. I. 173; Fisher *v.* Boody, 1 Curt. 206; Eyve *v.* Potter, 15 How. 42.

We conclude that the statement in the specification to which allusion has been made is a statement which rests upon no substantial foundation, and was most likely inserted in the specification for the purpose of forestalling objections to the granting of a patent. — Mahler *v.* Animarium, 111 Fed. 530; 49 C. C. A. 431.

FUNCTION.

§ 426. Patentability.

It has been perfectly well settled ever since the time of Corning *v.* Burden that a function is not patentable, but to determine whether a claim is so far functional in character as to be invalid is a constantly recurring problem. It is never a question of the rule itself, but whether the claim comes under the rule. This subject recurs under *Invention — Result or Function.*

It is well settled that a man cannot have a patent for the function or abstract effect of a machine, but only for the machine which produces it. — Corning *v.* Burden, 15 How. 252; 14 L. Ed. 683.

An inventor who has devised a machine for performing a particular function cannot claim to cover every machine performing the same function. — Dryfoos *v.* Weise, 124 U. S. 32; 31 L. Ed. 362; 8 S. Ct. 354.

A function which is an incident to the operation of a machine attributable to the skill and deftness of the operator, rather than a distinct function of the machine cannot be claimed as novelty. — Union *v.* Keith, 139 U. S. 530; 35 L. Ed. 261; 11 S. Ct. 621.

The difficulty we have found with this claim is, it is open to the objection (held in several cases to be fatal) that the new function of a machine cannot be patented. — Westinghouse *v.* Boyden, 170 U. S. 537; 42 L. Ed. 1136; 18 S. Ct. 707.

Corning *v.* Burden, 15 How. 252; Burr *v.* Duryee, 1 Wall. 531; Fuller *v.* Yentzer, 94 U. S. 288; Locomotive *v.* Medart, 158 U. S. 68; Paper Bag Case, 30

Fed. 63; Machine Co. *v.* Waterbury, 39 Fed. 389; Travers *v.* Cordage Co. 64 Fed. 771.

That a claim for a function is invalid, see Goshen *v.* Bissell, 72 Fed. 67; 19 C. C. A. 13.

A claim for a function is not patentable. — Boyden *v.* Westinghouse, 70 Fed. 816; 17 C. C. A. 430.

Now, the function or result of the operation of a machine or combination is not patentable under our laws, and therefore the camber in the beam could not be monopolized by means of a patent. The means, the mechanical device, by which that camber was produced and that alone, was capable of protection by such a franchise. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

Fuller *v.* Yentzer, 94 U. S. 288; Pencil Co. *v.* Howard, 20 Wall. 498; Miller *v.* Mfg. Co., 151 U. S. 186; Knapp *v.* Morss, 150 U. S. 221; Carver *v.* Hyde, 16 Pet. 513; LeRoy *v.* Tatham, 14 How. 156; Corning *v.* Burden, 15 How. 252; Burr *v.* Duryee, 1 Wall. 531.

Again, since a function is not patentable, a combination of functions is not; nor is a combination of mechanical devices or elements and one of the functions of that combination. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

A valid patent cannot be secured for a function, a mode of operation, or a result, separate from the means or mechanical devices by which the result is accomplished. — Union *v.* Diamond, 162 Fed. 148; 89 C. C. A. 172.

Fuller *v.* Yentzer, 94 U. S. 288; Westinghouse *v.* Boyden, 170 U. S. 537.

§ 427. Miscellaneous Rules.

The distinction between a practically operative mechanism and its function is said to be difficult to define. Rob. Pat. sec. 144. It becomes more difficult when a definition is attempted of a function of an element of a combination which is the means by which other elements are connected and by which they co-act to make complete and efficient the invention. — Continental *v.* Eastern, 210 U. S. 405; 51 L. Ed. 922; 28 S. Ct. 748.

An inventor is entitled to a beneficial function of his invention, whether he knew all its beneficial uses or not. — Goshen *v.* Bissell, 72 Fed. 67; 19 C. C. A. 13.

McCormick *v.* Aultman, 69 Fed. 371; Roberts *v.* Ryer, 91 U. S. 150; Brown *v.* D. C. 130 U. S. 87–103; Eames *v.* Andrews, 122 U. S. 40; Miller *v.* Mfg. Co. 151 U. S. 201; Stow *v.* Chicago, 104 U. S. 550; Tucker *v.* Spalding, 13 Wall. 453; Appleton *v.* Starr, 60 Fed. 411; Western *v.* Sperry, 58 Fed. 186; Galt *v.* Parlin, 60 Fed. 422; Dixon *v.* Pfeifer, 55 Fed. 390; Thompson *v.* National, 65 Fed. 427.

It is not always clear what is meant by the use of this elastic and indefinite word "function." But it is thought that the assertion of a new function or effect should only be sustained upon proof of novel or unexpected properties or uses capable of producing novel results. Smith *v.* Goodyear, 93 U. S. 486. We are not aware of any case where a claim for a new function has been sustained in the absence of such element of novelty or unexpectedness. — General *v.* Yost, 139 Fed. 568; 71 C. C. A. 552.

GOVERNMENT.

§ 428. Statutory Provisions.

All officers and employees of the Patent Office shall be incapable, during the period for which they hold their appointments, to acquire or take, directly or indirectly, except by inheritance or bequest, any right or interest in any patent issued by the Office. — R S. 480.

No royalty shall be paid by the United States to any one of its officers or employees for the use of any patent for the system, or any part thereof, mentioned in the preceding section (marine engines), nor for any such patent in which said officer or employee may be directly or indirectly interested. — R. S. 1673.

* * * * * * * * * * * * *

The Secretary of the Interior and the Commissioner of Patents are authorized to grant any officer of the Government, except officers and employees of the Patent Office, a patent for any invention of the classes mentioned in sec. 4886 of the Revised Statutes when such invention is used or to be used in the public service, without the payment of any fee: *Provided*, That the applicant in his application shall state that the invention described therein, if patented, may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without the payment to him of any royalty thereon, which stipulation shall be included in the patent. — Act Mar. 3, 1883, appended to 4886 R. S.

§ 429. General Rulings.

As will be seen, the Government has no different property rights and no different exemption from liability than any other person or corporation. Of course, an injunction will not lie, and actions lie in the Court of Claims instead of in the circuit court. The subject of jurisdiction is treated under *Jurisdiction — Court of Claims*, and the subject of governmental infringement is treated under *Infringement — Government*.

The government of the United States has no prerogative right which gives it any right to use the patented invention of a citizen on other terms than any citizen. — James *v.* Campbell, 104 U. S. 356; 26 L. Ed. 786.

There is no difference between the government and any other employer. If one is employed to devise and perfect an instrument, or means for accomplishing a desired result, he cannot, after successfully accomplishing his work for which he was employed plead title thereto as against his employer. That which he has been employed and paid to accomplish, becomes, when accomplished the property of his employer. So also when one is in the employ of another in a certain line of work, and devises an improved method or instrument for doing the work, and uses the property of his employer and the services of other employees to develop and put in practicable form his invention, and explicitly assents to the use by his employer of his invention, a jury, or a court trying the facts, is warranted in finding that he has so far recognized the obligations of service flowing from his employment and the benefits resulting from his use of the property, and the assistance of the co-

employees of his employer, as to have given to such employer an irrevocable license to use such invention. — Solomons *v.* U. S. 137 U. S. 342; 34 L. Ed. 667; 11 S. Ct. 88.

McClurg *v.* Kingsland, 42 U. S. 202.

The government has no more right to appropriate a man's property invested in a patent than it has to take his property vested in real estate; nor has the fact that an inventor is at the time of his invention in the employ of the government transfer to it any title or interest therein. There is no difference between the government and any other employer in this respect. But when he is employed to and does invent in his capacity, the government acquires the same rights, and the same rules obtain, as in the case of any other employee. — Solomons *v.* U. S. 137 U. S. 342; 34 L. Ed. 667; 11 S. Ct. 881.

It would seem that, although the contractor in the performance of his contract and with the knowledge of the officers of the government may infringe a patent in the actual performance of such work (as infringing a process for laying a pavement) the government is in no way liable in damages. — Schillinger *v.* U. S. 155 U. S. 163; 39 L. Ed. 108; 15 S. Ct. 85.

Harlan and Shiras dissenting.

There is no doubt whatever of the proposition laid down in Solomons *v.* U. S. 137 U. S. 342, that the mere fact that a person is in the employ of the Government does not preclude him from making improvements in the machines with which he is connected, and obtaining patents therefor as his individual property, and that in such cases the government would have no more right to seize upon and appropriate such property than any other proprietor would have. On the other hand, it is equally clear that, if the patentee be employed to invent or devise such improvements, his patents obtained therefor belong to his employer, since in making such improvements he is merely doing what he was hired to do. — Gill *v.* U. S. 160 U. S. 426; 40 L. Ed. 480; 16 S. Ct. 322.

The United States may be sued by a patentee for their use of his invention under a contract made with him by the United States or by their authorized officers. — Belknap *v.* Schild, 161 U. S. 10; 16 L. Ed. 599; 16 S. Ct. 443.

U. S. *v.* Burns, 79 U. S. 246; U. S. *v.* Palmer, 128 U. S. 262; U. S. *v.* Berdan, 156 U. S. 552.

IMPROVEMENT.

§ 430. Statute Authority and General Statement.

Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement thereof * * * — R. S. 4886.

The term "improvement" is used with great freedom in the statute, by the Patent Office, and by the courts. It is no more definable than the term invention. Some have tried to classify improvements as a separate class of inventions, but the attempt has not proved wholly satisfactory. The author has not undertaken to correct the custom and usage of the legislative, executive or judicial departments of Government, however wrong or loose the same may have been. Supplemental sections will be found under *Infringement* and *Invention*.

§ 431. Carrying Forward.

But a mere carrying forward or new or more extended application of the original thought, a change only in form, proportions or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will sustain a patent. These rules apply alike, whether what preceded was covered by a patent or rested only in public knowledge or use. In neither case can there be an invasion of such domain and an appropriation of anything found there. In one case everything belongs to the prior patentee; in the other to the public at large. — Smith *v.* Nichols, 88 U. S. 112; 22 L. Ed. 566.

The mere carrying forward of an old idea, though effecting an improvement, is not invention. — Guidet *v.* Brooklyn, 105 U. S. 550; 26 L. Ed. 1106.

In short, this is a patent for superior workmanship, and within all the authorities is invalid. This court has repeatedly stated that all improvement is not invention. If a certain device differs from what precedes it only in superiority of finish, or in greater accuracy of detail, it is but carrying forward of an old idea, and does not amount to invention. Thus if it had been customary to make an article of unpolished metal it does not involve invention to polish it. If a telescope had been made with a certain degree of power, it involves no invention to make one which differs from the other only in its having greater power. If boards had heretofore been planed by hand, a board better planed by machinery would not be patentable, although in all those cases the machinery itself may be patentable. — Risdon *v.* Medart, 158 U. S. 68; 39 L. Ed. 899; 15 S. Ct. 745.

Smith *v.* Nichols, 88 U. S. 112; Pickering *v.* McCullough, 104 U. S. 310; Burt *v.* Evory, 133 U. S. 349; Wooster *v.* Calhoun, 11 Blatchf. 215.

A mere carrying forward or an extended application of the original device with the change only in degree, is not patentable invention. — Eames *v.* Worcester, 123 Fed. 67; 60 C. C. A. 37.

Smith *v.* Nichols, 21 Wall. 112; Burt *v.* Evory, 133 U. S. 349; Grant *v.* Walter, 148 U. S. 547; Market *v.* Rowley, 155 U. S. 621; Fox *v.* Perkins, 52 Fed. 205; Galvin *v.* Grand Rapids, 53 Fed. 165.

It is not invention to merely carry forward an invention shown in a prior machine. — Van Epps *v.* United, 143 Fed. 869; 75 C. C. A. 77.

Smith *v.* Nichols, 21 Wall. 112; Ansonia *v.* Electrical, 144 U. S. 11.

This simplifying of the process may have involved an exercise of the inventive faculties, but surely does not entitle its author to rank as a pioneer. Such improvements are a part of the evolution and natural development of every art. An inventor of such an improvement must be confined strictly to the particular advantage which he has made and cannot levy tribute

on the improvement of others. — Universal *v.* Sonn, 154 Fed. 665; 83 C. C. A. 422.

§ 432. Claims.

An inventor who has made an improvement in a machine cannot include all previous inventions, and have a claim to the whole art, discovery, or machine which he has improved. All others have an equal right to make improved machines, provided they do not embody the same or substantially the same devices or combination of devices, which constitute the peculiar characteristic of the previous invention. — Burr *v.* Duryee, 68 U. S. 531; 17 L. Ed. 750.

A patent is addressed to those familiar with the art. A new and useful improvement upon an old machine is just as much the subject of a patent as a new machine. All that the inventor is required to do is to point out distinctly the part he claims as new, so as to advise the public as to the extent of his invention, and what is thereby withdrawn from the public. — Goshen *v.* Bissell, 72 Fed. 67; 19 C. C. A. 13.

Parks *v.* Booth, 102 U. S. 96; Seymour *v.* Osborne, 11 Wall. 516; Roberts *v.* Nail Co. 53 Fed. 916; 2 Rob. Pat. 530–534.

The claims of a patent covering a mere improvement upon prior machines, which were capable of accomplishing the same general result, must receive a narrow interpretation. — Greene *v.* Buckley, 135 Fed. 520; 68 C. C. A. 70.

Morley *v.* Lancaster, 129 U. S. 263.

§ 433. Combinations.

Improvements in machines protected by letters patent may also be mentioned, of a much more numerous class, where all the ingredients of the invention are old, and where the invention consists entirely of a new combination of old ingredients, whereby a new and useful result is obtained, and many of them are of great utility and value, and are just as much entitled to protection as those of any other class. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

Union *v.* Matthieson, 2 Fish. P. C. 605.

The patent is not a pioneer or primary one in any sense, and the owner is not entitled to much range of equivalents. The claims must be limited in their scope to the actual combination of essential parts as shown, and cannot be construed to cover other combinations of elements or different construction of arrangement. — St. Louis *v.* American, 156 Fed. 574; 84 C. C. A. 340.

Cimiotti *v.* American, 198 U. S. 399; Kokomo *v.* Kitselman, 189 U. S. 8; Greene *v.* Buckley, 135 Fed. 520.

§ 434. General Rule.

Nor can its validity be impeached upon the ground that it is an improvement upon a former invention, for which the patentee had himself already obtained a patent. Any other inventor might do so; and there can be no reason, in justice or in policy, for refusing the like privilege to an original inventor. — O'Reilly *v.* Morse, 15 How. 62; 14 L. Ed. 601.

But if the invention claimed be itself but an improvement on a known machine by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original machine

by use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first. — McCormick *v.* Talcott, 61 U. S. 402; 15 L. Ed. 930.

For ordinary improvers the stimulus of the rewards offered by our patent laws is needed to encourage by the hope of profit that zealous eagerness to improve processes, to remedy defects in machinery, to invent new methods and appliances for saving labor and cheapening productions in the numberless articles that are in daily use. It is this stimulus that has made the American mechanic the most alert, observant, and studious of any in the world, and it is the indefinite multiplication of these small inventions and improvements that has wrought an industrial revolution and brought this country to the forefront of the world's commerce. — Crown *v.* Aluminum, 108 Fed. 845; 48 C. C. A. 72.

The alleged improver may have a valid patent for his new means, and is entitled to its exclusive use; but the prior patent equally excludes him from the use of the prior invention, with or without his improvement. — Columbia *v.* Kokomo, 143 Fed. 116; 74 C. C. A. 310.

Cochrane *v.* Deener, 94 U. S. 780.

§ 435. Generic.

The Arnold and Pipo machines merely gave hints how a plaiting machine could be made. The manufacture of plaits originated with the mechanism of Crosby and Kellogg, whose machine was not an addition to an old structure, as in Garretson *v.* Clark, supra, or in Reed *v.* Lawrence, 29 Fed. 915. — Tuttle *v.* Claflin, 76 Fed. 227; 22 C. C. A. 138.

If the evidence was true that Cramer was the first to present a new and useful combination by mounting his treadle in the vertical cross-brace, thereby obtaining the advantages which some of the witnesses testified to, he was undoubtedly entitled to the protection, and to the exclusive right to mount a treadle in the cross brace, no matter what the form of the bearings of the treadle might be. — Singer *v.* Cramer, 109 Fed. 652; 48 C. C. A. 588. Reversed, 192 U. S. 265.

Winans *v.* Denmead, 15 How. 330; Ives *v.* Hamilton, 92 U. S. 426; Machine Co. *v.* Murphy, 97 U. S. 120; Hoyt *v.* Horne, 145 U. S. 308.

The device was wholly novel, performing a function never before performed, achieving at once an extensive demand and a successful use; and the invention, small in character though it seem, is therefore entitled to a primary rank. — Chicago *v.* Miller, 133 Fed. 541; 66 C. C. A. 517.

Westinghouse *v.* Boyden, 170 U. S. 537.

We think it cannot be said that Jordan was a pioneer inventor in the sense that he was first to produce a machine to successfully form can bodies. He was first, however, to form can bodies by the use of a rotating horn. His invention must be accorded a place inferior, perhaps, to that of a primary invention, but far in advance of those which constitute but a slight improvement on the prior art. His claims, therefore, while not entitled to the broadest construction accorded to the former, are not to be restricted to the narrow construction applicable to the latter. He is entitled to the protection of the doctrine of equivalency in proportion to the nature of the advance which his invention indicates. — American *v.* Hickmott, 142 Fed. 141; 73 C. C. A. 359.

Penfield *v.* Chambers, 92 Fed. 630; McCormick *v.* Aultman, 69 Fed. 371; Muller *v.* Tool, 77 Fed. 621; Letson *v.* Alaska, 130 Fed. 140; Miller *v.* Eagle, 115 U. S. 186.

The conception of Bates was not pioneer invention in the broad sense of the term, and the mechanism described in the patent was merely an improvement upon the old wire-barbing machines. Nevertheless the invention was meritorious — a marked advance in the art, and of unquestionable utility — so that the patentee is not only entitled to protection of his monopoly against colorable evasions, but, for such protection, is entitled as well to the benefit of the doctrine of equivalents, commensurate with the invention disclosed, though not of the broad range which is accorded an invention of primary character. — Columbia *v.* Kokomo, 143 Fed. 116; 74 C. C. A. 310.

Miller *v.* Eagle, 151 U. S. 186; Bundy *v.* Detroit, 94 Fed. 524; National *v.* Interchangeable, 106 Fed. 693.

The assumed prototype of the device was a failure, and Bates was the pioneer in his conception of a combination, which solved the problem where other inventors had failed in the quest. Exact measurement of the faculty thus brought to the solution is needless in the face of the undeniable achievement. The combination so devised is both new and useful in the sense and within the objects of the patent law. — Columbia *v.* Kokomo, 143 Fed. 116; 74 C. C. A. 310.

The defendant contends that, inasmuch as Chadbourn (the inventor of the prior device) discloses the generic combination, the only novelty of Johnson (the inventor of the patent in suit) lies in the form of the secondary motor, or in the form of the secondary valve. This, in our opinion, is erroneous. He (Johnson) was first to regulate the heat supply, using a relay or secondary motor operated by compressed air, and this seems to have been a very practical and important contribution to the art of heat regulation. We are of the opinion, therefore, that Johnson, and not Chadbourn, is to be regarded as the inventor of the generic combination, and that the claims are to be construed not merely as for minor and detailed improvements, but for a primary invention in the specific field of heat regulation. In order to hold that Chadbourn's patent in any respect anticipates or limits the patent in suit, we should be obliged to lay great stress upon a mere verbal suggestion of Chadbourn as to the use of air, and to ignore the fact that he had apparently no conception whatever of the modifications which the use of a compressed-air relay would permit in practical apparatus for heat regulation. We also should be obliged to ignore entirely Johnson's exact and definite conception which led to an important improvement upon an art which Johnson had already brought to a high degree of development. We are of opinion that, in sustaining the Johnson patent and giving it a construction commensurate with Johnson's actual contribution to the practical art, we are well within the principles laid down and applied in Lawther *v.* Hamilton, 124 U. S. 1; Western *v.* LaRue, 139 U. S. 601; Potts *v.* Creager, 155 U. S. 597; Cash Register Case, 156 U. S. 502; Hobbs *v.* Beach, 180 U. S. 383; and applied by us in Watson *v.* Stevens, 51 Fed. 757; Davey *v.* Prouty, 107 Fed. 505; Forsyth *v.* Garlock, 142 Fed. 461. — Weld *v.* Johnson, 147 Fed. 234; 77 C. C. A. 376.

Gathright's device, though an improvement upon existing tabulators, was an improvement of such vital importance that it may be said that the art, when considered from a practical and commercial point of view, began with him. He converted a theory into a fact. His invention belongs to that large class which have been treated with liberality by the courts, when the inventor by an apparently simple change, addition or transposition of parts

has converted imperfection into completeness. — Wagner *v.* Wycoff, 151 Fed. 585; 81 C. C. A. 129.

Westinghouse *v.* Boyden, 170 U. S. 537; Barbed Wire Patent, 143 U. S. 275; Consolidated *v.* Crosby, 113 U. S. 157; Hobbs *v.* Beach, 180 U. S. 383; Topliff *v.* Topliff, 145 U. S. 156.

§ 436. Infringement of.

One invention may include within it many others, and each and all may be valid at the same time. This only consequence follows: that each inventor is precluded from using inventions made and patented prior to his own, except by license from the owners thereof. His invention and his patent are equally entitled to protection from infringement, as if they were independent of any connection with them. — Cochrane *v.* Deener, 94 U. S. 780; 24 L. Ed. 139.

An improvement, although it may be a proper subject of a patent, in use may involve the prior invention, and therefore infringe it. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

That a narrow improvement, while of undoubted utility, which must be very narrowly construed in order to save the patent from anticipation, must be construed equally narrowly as to infringement, see Tower *v.* Eagle, 94 Fed. 361; 36 C. C. A. 294.

That an improvement suggested by acquaintance with a prior patented device is not necessarily indicative of infringement or lack of invention, see Cushman *v.* Goddard, 95 Fed. 664; 37 C. C. A. 221.

Westinghouse *v.* Boyden, 170 U. S. 537.

Note: This may be an inference from the Westinghouse case, but its value is very doubtful; because it is merely an inference, and unless positively backed up by substantial proof, has very small evidential value.

That the claims for improvements in a well-worked art will be strictly construed when both patents in litigation — the patent sued on and the patent justified under — are of such a character, see Mayor *v.* Holmquist, 145 Fed. 179; 76 C. C. A. 149.

Milwaukee *v.* Brunswick, 126 Fed. 185; Loew *v.* Miller, 138 Fed. 889.

§ 437. Mechanical Skill.

It may be admitted that the inventor's later patent performed the work it was designed to accomplish in a better and more workmanlike manner than any of the preceding devices patented, because, as stated, there were constant improvements in the art to which it related. So far as this record shows, it was the last of a series of patents designed to accomplish the same object. As such, it necessarily retained all the beneficial features of the earlier patents, and, to a certain extent, improved upon them. Such improvement, however, was an improvement in degree only, and was therefore not patentable. — Busell *v.* Stevens, 137 U. S. 423; 34 L. Ed. 719; 11 S. Ct. 150.

Burt *v.* Evory, 133 U. S. 349.

Something more is required to support a patent than a slight advance over what had preceded it or mere superiority in workmanship or finish. — International *v.* Gaylord, 140 U. S. 55; 35 L. Ed. 347; 11 S. Ct. 716.

Smith *v.* Nichols, 88 U. S. 112; Atlantic *v.* Brady, 107 U. S. 192; Pickering *v.* McCullough, 104 U. S. 310.

When the field is new inventions are striking and novel; when old improvements are so slight as to fall near to mechanical skill. — Haughey *v.* Lee, 151 U. S. 282; 38 L. Ed. 162; 14 S. Ct. 331.

Where, of a number of independent inventors working in the same field, one takes the last step which accomplishes the result sought, a strong presumption of invention is raised in his favor. But where a number of workers in a single field, when confronted by an obstacle to the development of a device, naturally, and practically contemporaneously, independently substitute one well-known material for another, and, finding that it successfully overcomes such obstacle, use it publicly and privately without any claim of exclusive right, the presumption is raised that such workers rightly regarded the substitution as a mere improvement, a mere choice of material such as would be adopted or selected by the skilled workman, or a double use. — Thomson-Houston *v.* Lorain, 117 Fed. 249; 54 C. C. A. 281.

At most, this addition is but the mere extension of an old idea, and nothing more than the ordinary mechanical skill of one conversant with the art could readily supply. To admit patentability in this would be to hold that every duplication ad infinitum of similar forms founded on an old principle would be patentable invention. — Standard *v.* Computing, 126 Fed. 639; 61 C. C. A. 541.

Smith *v.* Nichols, 21 Wall. 112; Grant *v.* Walter, 148 U. S. 547; Schreiber *v.* Grimm, 72 Fed. 671; Soehner *v.* Favorite, 84 Fed. 182.

It did not involve invention to weaken the entire enclosing head so that the whole head would yield under excessive interior pressure produced by freezing, instead of weakening a part of the enclosing head. Such a change would fall within the established principle that a mere carrying forward of an original conception patented; a new and more extended application of it, involving only change of form, proportions or degree; the substitution of equivalents doing substantially the same thing in the same way, by substantially the same means, with better results — is not such invention as will sustain a patent. — Neptune *v.* National, 127 Fed. 563; 62 C. C. A. 345.

Smith *v.* Nichols, 21 Wall. 112; Burt *v.* Evory, 133 U. S. 349; Hollister *v.* Benedict, 113 U. S. 59.

The result of the application of the common skill and experience of a mechanic, which comes from habitual and intelligent practice of his calling, to the correction of some slight defect in a machine or combination, or to a new arrangement or grouping of its parts, tending to make it more effective for the accomplishment of the object for which it was designed, not involving a substantial discovery, nor constituting an addition to our knowledge of the art, is not within the protection of the patent laws. — Sloan *v.* Portland, 139 Fed. 23; 71 C. C. A. 460.

Gates *v.* Fraser, 153 U. S. 332; Florsheim *v.* Schilling, 137 U. S. 64; Hollister *v.* Benedict, 113 U. S. 59; Atlantic *v.* Brady, 107 U. S. 192; Dunbar *v.* Meyers, 94 U. S. 187; Hotchkiss *v.* Greenwood, 11 How. 267; Adams *v.* Lindell, 77 Fed. 432; Tiemann *v.* Kraatz, 85 Fed. 437.

§ 438. Old Device, New Use.

This inventor took the well-known parts of an ordinary double-action pump, changed some of them slightly in form, added a new device, and produced something which would do what was wanted. While nominally he only made an improvement in pumps, he actually made an improved pump. For ordinary uses the improvement added nothing to the value of the old

pump, but for the new and special purpose in view, the old pump was useless without the improvement. — Goulds *v.* Cowing, 105 U. S. 253; 26 L. Ed. 987.

All the elements in the combination have been used before, and the functions of each were well known in the art, but it does not appear that they had ever been similarly, specifically combined for effectuating the purpose here accomplished. The grant of the patent carries with it the presumption of patentability, and this presumption has been strengthened by the general acceptance of the device, the acquiescence of those skilled in the art, and their willingness to accept licenses thereunder. — Millheim *v.* Western, 95 Fed. 152; 37 C. C. A. 38.

His contribution to the art did not consist in improving the form or location or sequence of elements in an existing combination, but in taking and combining the elements to produce a new result. He is entitled to an application of the doctrine of equivalents in proportion to the scope of his invention. — Adam *v.* Folger, 120 Fed. 260; 56 C. C. A. 540.

§ 439. On Prior Patent to Same Inventor.

He must stand on the same footing with any other inventor of an improvement upon a previous discovery. Nor is he bound in his new patent to refer specially to his former one. All that the law requires is that he shall not claim as new what is covered by a former invention, whether made by himself or any other person. — O'Reilly *v.* Morse, 15 How. 62; 14 L. Ed. 601.

§ 440. Patentability.

That an improvement upon a well-known device is patentable; and that proof of the existence of the old device does not defeat the improvement. — Evans *v.* Eaton, 3 Wheat. 454; 4 L. Ed. 433.

If the same combinations existed before in machines of the same nature up to a certain point, and the party's invention consists in adding some new machinery, or some improved mode of operation, to the old, the patent should be limited to such improvement, for if it includes the whole machinery, it includes more than his invention, and therefore cannot be supported. — Evans *v.* Eaton, 7 Wheat. 356; 5 L. Ed. 472.

Improvements for which a patent may be granted must be new and useful, within the meaning of the patent law, or the patent will be void, but the requirement of the Patent Act in that respect is satisfied if the combination is new and the machine is capable of being beneficially used for the purpose for which it was designed, as the law does not require that it should be of such general utility as to supersede all other inventions in practice to accomplish the same object. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

Lowell *v.* Lewis, 1 Mason, 182; Bedford *v.* Hunt, 1 Mason, 302; Many *v.* Jagger, 1 Blatchf. 372; Barret *v.* Hall, 1 Mason, 447.

Particular changes must be made in the construction and operation of an old machine so as to adapt it to a new and valuable use not known before, and to which the old machine had not been, and could not be, applied without those changes and, under the circumstances, if the machine, as changed and modified, produce a new and useful result, it may be patented, and the patent will be upheld under existing laws. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

Bray *v.* Hartshorn, 1 Cliff. 541; Losh *v.* Hague, 1 Web. P. C. 207; Hind. Pat. 95; Phillips *v.* Page, 24 How. 166; Norm. Pat. 25.

A new idea may be engrafted upon an old invention, but distinct from the conception which preceded it, and be an improvement. In such case it is patentable. — Smith *v.* Nichols, 88 U. S. 112; 22 L. Ed. 566.

When a subsequent apparatus is substantially the same as one which precedes it, it is not the proper subject of a patent; but if it be substantially different in construction and mode of operation, then it is as much the proper subject of a patent as if nothing of the kind had ever before been invented. — Fuller *v.* Yentzer, 94 U. S. 299; 24 L. Ed. 107.

Dissenting: Waite, Strong, Miller, Bradley.

The first defense is based on the theory that a patent cannot be valid unless it is new in all its elements as well as in the combination. But this theory cannot be maintained. If it were so no patent for an improvement on a known contrivance or process could be valid. And yet the great majority of patents are for improvements in old and well known devices or on patented contrivances. — Cantrell *v.* Wallick, 117 U. S. 689; 29 L. Ed. 1017; 6 S. Ct. 970.

Seymour *v.* Osborne, 11 Wall. 516; Loom *v.* Higgins, 105 U. S. 580; Hailes *v.* Van Wormer, 20 Wall. 353; Star *v.* Crossman, 4 Cliff. 568.

Two patents may be both valid when the second is an improvement upon the first, in which event, if the second includes the first, neither of the two patentees can lawfully use the invention of the other without the other's consent. — Cantrell *v.* Wallick, 117 U. S. 689; 29 L. Ed. 1017; 6 S. Ct. 970.

Star *v.* Crossman, 4 Cliff. 568.

The test of an improvement is that it must be the product of an original conception. — Burt *v.* Evory, 133 U. S. 349; 33 L. Ed. 640; 11 S. Ct. 349.

Pearce *v.* Mulford, 102 U. S. 112; Slawson *v.* Grand, 107 U. S. 649; Munson *v.* N. Y. 124 U. S. 601; Smith *v.* Nichols, 88 U. S. 112.

It may be true, as claimed, that complainants' machine is superior to prior devices; but the question is whether, in view of what is disclosed, in the previous machines, it can be properly said that his machine or combination constitutes such a substantial advance or improvement over prior devices as involves invention, and will entitle him to a patent therefor. "It is well settled that not every improvement in an article is patentable. The test is that the improvement must be the product of an original conception. A mere carrying forward or more extended application of an original application of an original idea — a mere improvement in degree — is not invention." — Fox *v.* Perkins, 52 Fed. 205; 3 C. C. A. 32.

Burt *v.* Evory, 133 U. S. 358; Smith *v.* Nichols, 21 Wall. 112; Howe *v.* National, 134 U. S. 397; Ansonia *v.* Electrical, 144 U. S. 11; Roller Co. *v.* Walker, 138 U. S. 124.

The history and nature of the invention shows that it did not consist in a mere change of material. It was not an India rubber surgical instrument, as distinguished from an instrument made of metal or webbing, but it was an improvement upon an existing India-rubber tube, which was valuable, and which the record shows had evaded invention, study and skill. — Stohlmann *v.* Parker, 53 Fed. 925; 4 C. C. A. 109.

For any new and useful improvement which contained also the element of invention, or for a separate invention, a subordinate patent could be obtained. — Westinghouse *v.* N. Y. 63 Fed. 962; 11 C. C. A. 528.

§ 441. Scope — Limitations.

Where the specification discloses several combinations and separate inventions the word improvement will be construed as in the plural. — Evans *v.* Eaton, 3 Wheat. 454; 4 L. Ed. 433.

Under the proofs, we find ourselves unable to assent to the proposition that the plaintiff was a pioneer. While it must be conceded that none of the earlier patents anticipate him, his true relation to this particular branch of the art seems to be nothing more than that of an improver. — Lewis *v.* Pa. Steel Co. 59 Fed. 129; 8 C. C. A. 41.

This is not a case where Adams preceded all the rest, and struck out something which included and underlay all that they produced. It is a case in which the principles to be applied, and the mechanical elements to be used, were all old and well known. Many minds were independently striving to accomplish the same purpose. Adams formed and patented one combination. Edison, Finney, and Sprague devised and used others. Each is entitled to his own form, so long as it differs from that of his competitor, and does not include theirs, and neither is entitled to subject to tribute those whose combinations are not mere evasions of his own. The franchise of Adams was limited by the state of the art to the specific combination he described and claimed in his patent, and to palpable evasions of it. — Adams Elec. Ry. *v.* Lindell, 77 Fed. 432; 23 C. C. A. 223.

No one can claim the complete whole, and each is entitled only to the specific form or device which he produces, and every other inventor is entitled to his own specific form, so long as it differs from those of his competitors, and does not include theirs. — Mann *v.* Hoffman, 104 Fed. 245; 43 C. C. A. 514.

Railway *v.* Sayles, 97 U. S. 554; Duff *v.* Pump Co. 107 Fed. 636; Boyd *v.* Janesville, 158 U. S. 260.

When the advance toward the desideratum is gradual, and several inventors form different combinations which accomplish the desired result with varying degrees of success, each is entitled to his own combination so long as it differs from those of his competitors and does not include theirs. — Kinloch *v.* Western, 113 Fed. 659; 51 C. C. A. 369.

National *v.* Interchangeable, 106 Fed. 693; Railway *v.* Sayles, 97 U. S. 554; McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Mfg. Co. 61 Fed. 980; Griswold *v.* Harker, 62 Fed. 389; Adams *v.* Lindell, 77 Fed. 432.

Where the advance in the art is gradual, and several inventors make valuable improvements varying in degrees of success, each is entitled to his own combination, so long as it differs from those of his competitors and does not include theirs. — Ide *v.* Trorlicht, 115 Fed. 137; 53 C. C. A. 341.

National *v.* Interchangeable, 106 Fed. 693; Railway *v.* Sayles, 97 U. S. 554; McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Mfg. Co. 61 Fed. 980; Griswold *v.* Harker, 62 Fed. 389; Adams *v.* Lindell, 77 Fed. 432.

Where the advance in the art is gradual, and several inventors make valuable improvements and form different combinations, which accomplish the desired result with varying degrees of success, each is entitled to his own combination, so long as it differs from those of his competitors, and does not include theirs. — Anderson *v.* Collins, 122 Fed. 451; 58 C. C. A. 669.

National *v.* Interchangeable, 106 Fed. 693; Railway *v.* Sayles, 97 U. S. 554; McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Mfg. Co. 61 Fed. 980; Griswold *v.*

Harker, 62 Fed. 389; Adams *v.* Lindell, 77 Fed. 432; Ide *v.* Trorlicht, 115 Fed. 137.

He did not acquire the right to use the Bradley process simply because he had improved that process. — Electric Smelting *v.* Pittsburg, 125 Fed. 926; 60 C. C. A. 636.

Where the advance towards the desideratum is gradual, and several inventors form different combinations and make different improvements which materially aid to accomplish the desired results, each is entitled to his own combination or improvement, so long as it differs from those of his competitors and does not include theirs. — Mallon *v.* Gregg, 137 Fed. 68; 69 C. C. A. 48.

National *v.* Interchangeable, 106 Fed. 693; Railway *v.* Sayles, 97 U. S. 554; McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Mfg. Co. 61 Fed. 980; Griswold *v.* Harker, 62 Fed. 389; Adams *v.* Lindell, 77 Fed. 432.

There is room for such an adapter (a narrow improver) to have only a specific patent for his particular form of adaptation, and he is not privileged to exclude others from gleaning in the same general field. — Loew *v.* Miller, 138 Fed. 886; 71 C. C. A. 266.

Milwaukee *v.* Brunswick, 126 Fed. 171.

It is not given to any person to preclude all others from providing means for accomplishing any beneficial result. If the means are different — are not substantially the same — there is no infringement; there is not the use of the means contrived by the inventor; his idea is not appropriated, except the idea of the result to be accomplished, and in that there is no quality of invention. — Wessel *v.* United, 139 Fed. 11; 71 C. C. A. 423.

That he improved upon the prior structures in the way of simplifying the form and cheapening the casting when made integrally, is undoubted, and such improvement may involve invention; but it is well settled that the patent which may then be granted must be limited to the scope of the actual invention — to his "particular form of adaptation." — Hunt *v.* Milwaukee, 148 Fed. 220; 78 C. C. A. 116.

Loew *v.* Miller, 138 Fed. 886.

§ 442. Specific.

When a valid patent has been obtained, under such conditions (from a study of the state of the art) the claims of the patentee must be restricted to the precise form and arrangement of parts described in the specification. Such a patent is an entirety, and it is a familiar principle that all the parts of the combination must be used by the defendant in order to constitute an infringement. — Mott Iron Works *v.* Standard, 53 Fed. 819; 4 C. C. A. 28.

Howe *v.* Neemes, 18 Fed. 40; Matteson *v.* Caine, 17 Fed. 525; Bragg *v.* Fitch, 121 U. S. 478; Railway *v.* Sayles, 97 U. S. 554.

As these means existed in earlier machines, though not exactly in the same form, he was not entitled to make such claims, and they cannot be sustained, without restrictions on the specifications. His invention being not of a primary character, but of special means of accomplishing results that had hitherto been attained by means but little different in their nature, the invention was limited to the particular means provided. — Brown *v.* King, 107 Fed. 498; 46 C. C. A. 432.

MacCormick *v.* Aultman, 69 Fed. 371; Noonan *v.* Athletic, 99 Fed. 90; Wells *v.* Curtis, 66 Fed. 318.

Crary apparently originated the improvement, but it was, strictly speaking, a secondary invention, for it performs the function previously performed by the stationary platen, although it performs it in a much better way than had been accomplished by its predecessor. It was a substantial and meritorious invention, and was not limited to the details of the mechanism shown in the specification. — Writing Mach. *v.* Elliott, 108 Fed. 628; 47 C. C. A. 536.

Walk. Pat. sec. 359.

When two inventors have each adopted the substantial features or elements of an earlier invention, making respectively but slight changes in or improvements upon the earlier device, each will be limited to his own specific form of device; and, if there are differences therein, neither device will be held to be an infringement of the other. In all such cases the general words of a claim, especially where the claim contains words of reference to a more particular description of the thing patented, which is contained in the specification, will be held to cover only the structure of the device so particularly described. — Sander *v.* Rose, 121 Fed. 835; 58 C. C. A. 171.

McCormick *v.* Talcott, 20 How. 402; Railway *v.* Sayles, 97 U. S. 554; National *v.* Interchangeable, 106 Fed. 693; Brill *v.* St. Louis, 90 Fed. 666.

Even if the inventive faculty, as distinguished from ordinary mechanical skill, was exercised, yet, as the invention is not primary, and the patent of doubtful validity, the patentee should be limited to the specific form of machine which he produced, and describes in his specification. — Wilson *v.* Townley, 125 Fed. 491; 60 C. C. A. 327.

Railway *v.* Sayles, 97 U. S. 554; Morley *v.* Lancaster, 129 U. S. 263; McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Excelsior, 61 Fed. 980.

To the extent of the specific claim, we are not inclined to defeat the patent merely because the change from earlier devices is slight and apparently simple, when it is, as this appears to be, novel, efficient, and popular. — Bradley *v.* Eccles, 126 Fed. 945; 61 C. C. A. 669.

Taking into consideration then just what Motsinger has done — the constructive idea being old, the mechanism being old, except his substitution of frictional peripheral engagement (frictional engagement being old) for cog peripheral engagement — we are forced to the conclusion, that though Motsinger's patent may cover a valuable improvement, it is not a pioneer patent, and must therefore be limited to the substantial mechanical means therein pointed out, or to their mechanical equivalents. . . .

Considered then, as a limited patent for a specific form of construction, we do not think the appellee infringes appellant's patent. Progress in nearly every field of mechanical activity is like the advance of the tide — the last high mark having been attained, not by a single thought thrown far in advance of the flood, but by the column of thought that the weight of the flood projects. Where one inventive mind has run far out, marking a distinct field to be thereafter covered, it is not difficult for the courts to set the stakes that give boundary to the advance. But when the advance is an item only of a similar advance all along the line — is borrowed almost altogether from the advance along the line — care must be taken that the boundaries given do not include, up and down the line, every character of mechanism that may thereafter bring about similar results. — Motsinger *v.* Hendricks, 149 Fed. 995; 79 C. C. A. 505.

§ 443. Utility.

It is quite true that this was not a very important discovery. The art in which it was devised is not the most useful. It could not properly be described as either a pioneer or primary invention, but it does indicate a distinct step forward in the art. It certainly is not in that class of patented devices which are on the border line of mechanical skill and invention, and for which courts have devised the strictest canons of construction. It shows an ingenuity which courts are glad to reward, and which they will not allow technical rules of interpretation intended to narrow the scope of patents of doubtful merit, to impair or destroy. — Bonnette *v.* Koehler, 82 Fed. 428; 27 C. C. A. 200.

Blandy *v.* Griffith, Fed. Cas. 1529.

It is not a pioneer or primary invention, but its successful use proves it to be a step in the art sufficiently meritorious to warrant the monopoly of the patent. — Kisinger-Ison *v.* Bradford, 97 Fed. 502; 38 C. C. A. 300.

In that case (Krementz *v.* Cottle, 148 U. S. 556) novelty was found to reside in making a stud or collar-button by swedging a piece of sheet metal into the desired form although the form was old, the process of swedging metal into any desired form, and the studs made in the same way, but more solidly, were likewise old. The patent was sustained because of the recognition by the trade of the practical merits of the stud. So in this case, where, so far as it appears, it had never occurred to the many persons who were experimenting with asbestos fabrics, that the sheets could be stitched to a solid backing, and the threads so embedded in the fibres as to be impervious to fire, if it should be shown that the article was practically valuable and had created a new industry, the question of patentable novelty might well be decided in favor of the patent. — Beer *v.* Walbridge, 100 Fed. 465; 40 C. C. A. 496.

The embodiment of this conception in mechanical form, necessarily embraced the disk conception, and to that extent infringed it; but, though an outgrowth, it goes distinctly beyond the disk apparatus substantially improving it, as we have already said, in those features that give to the disk apparatus its chief merit and purpose. Why is not improvement patentable? Its patentability will exclude no one who chooses, from the use of the previous disk apparatus. It is a further step in the direction towards which the disk conception was the first long step; it is a decided and valuable addition to the mechanism used in oil fields, and in connection with the disk form, for the purposes in view, it has no predecessor in the whole previous uses of eccentrics. This consideration, in our judgment, raises it to the merit of invention. — Grimes *v.* Allen, 102 Fed. 606; 42 C. C. A. 559.

It must be remembered, however, that an improvement of an old device or a new combination of old elements not infrequently marks a greater advance in the art and discloses a more useful invention than the conception of the original machine or a knowledge of the old elements of the combination, and that such an improvement is equally entitled with the conception of the original device to the protection of a patent. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

§ 444. Miscellaneous.

The right to improve on prior devices by making solid castings in lieu of constructions of attached parts is so universal in the arts as to have become a common one, so that the burden rests on any one who sets up this improve-

ment, in any particular instance as patentable to show special reasons to support his claims. — Consolidated *v.* Holzer, 67 Fed. 907; 15 C. C. A. 63.

Where a claim is predicated upon an improvement, the bill and the proof must show in what the improvement consists. — Tiemann *v.* Kraatz, 85 Fed. 437; 29 C. C. A. 257.

Peterson *v.* Wooden, Fed. Cas. 11,038.

Note: This I think is bad law and without any sound foundation. The patent is prima facie under the statute.

He was entirely familiar with the Painter inventions. He took his chances in the lottery of infringement, and has lost, and cannot be heard now to complain that he was misled. — Crown *v.* Aluminum, 108 Fed. 845; 48 C. C. A. 72.

INFRINGEMENT.

§ 445. The Statute.

The circuit court shall have original jurisdiction as follows:

* * * * * * * * * * * *

Ninth. Of all suits at law or in equity arising under the patent or copyright laws of the United States. — R. S. 629.

Damages for the infringement of any patent may be recovered by action on the case, in the name of the party interested either as patentee, assignee, or grantee. * * * — R. S. 4919.

The several courts vested with jurisdiction of cases arising under the patent laws shall have power to grant injunctions according to the course and principles of courts of equity, to prevent the violation of any right secured by patent * * * — R. S. 4921.

Special provisions relating to actions for infringement will be found in sections 973, 4897, 4899, 4917, 4920, 4922 and 4923, R. S.

§ 446. General Statement.

The subject of infringement is so interrelated with almost every other subject in the law of patents that any division must necessarily be arbitrary. Especially is this true with reference to such subjects as *Claims*, *Combinations*, and *Invention*, and to a certain extent with such subjects as *Abandonment*, *Anticipation*, *Defenses*, *Equivalents*, *Machine*, *Process*, *Product*, and *Specifications*.

There is no definition of the term infringement. The term relates to a condition which arises out of the combination of events, the creation of the monopoly by the Government and the invasion of that monopoly by a natural or artificial person. Notwithstanding a few stray expressions (see §§ 403, 406) the question of infringement, per se, is a question of fact; but since the marshalling of facts upon which the act of infringement may or may not be predicated is a matter of law in construing the specification and claims of the patent, and a matter of law in segregating the acts of the alleged infringer which may constitute infringement from those which may not, the actual problem, the difficult problem, is always one of law, or, at the least, one of mixed law and fact.

§ 447. Additions. — Elements.

The defendant's device, therefore, though it involves additional elements, involves every element present in the Morrison coupling. — Kisinger-Ison *v.* Bradford, 97 Fed. 502; 38 C. C. A. 300.

The whole testimony impresses us with the belief that the introduction of the soda ash was intended, not to bring about a product essentially different from the patented product, but to interpose a process so colorably different that it might be used as a shelter against the charge of infringement; and in this respect we are constrained to look upon the defense of infringement differently from the view taken by the Circuit Court. — National *v.* Elkhart, 123 Fed. 431; 59 C. C. A. 471.

If it be conceded that improvements are added, it is nevertheless an infringement. — American *v.* American, 128 Fed. 709; 63 C. C. A. 307.

Cantrell *v.* Wallick, 117 U. S. 689; Simmons *v.* Standard, 62 Fed. 928; Rohbins *v.* Dueber, 71 Fed. 186; Pennington *v.* King, 7 Fed. 462.

The defendant certainly has the patented lining; what else he has is not important. Of course, the addition of the inner brick wall does not avoid infringement. — American *v.* DeGrasse, 157 Fed. 660; 87 C. C. A. 260.

§ 448. Additions — Functions.

Infringement is not avoided by the fact that at the same time a revolutionary movement is imparted to the mechanism, which carries both the cap and the can during the operation. — Litson *v.* Alaska, 130 Fed. 129; 64 C. C. A. 463.

Ives *v.* Hamilton, 92 U. S. 426; Machine Co. *v.* Murphy, 97 U S. 120; Brush *v.* Condit, 132 U. S. 39; Hoyt *v.* Horne, 145 U. S. 302.

If the infringing device performs the same function as the patented device, it is immaterial that it also performs some other function. It is still none the less an equivalent of the patented device, and an appropriation of the patented invention. — Comptograph *v.* Mechanical, 145 Fed. 331; 76 C. C. A. 205.

Walker on Pat. (4th Ed.) 308, 309; Norton *v.* Jensen, 49 Fed. 859; Norton *v.* California, 45 Fed. 637; Sarven *v.* Hall, 21 Fed. Cas. 512; Masseth *v.* Palm, 51 Fed. 824; Wheeler *v.* Clipper, 29 Fed. Cas. 881; Kendrick *v.* Emmons, 14 Fed. Cas. 305.

§ 449. Assignor and Assignee — By Assignee.

The title to a patent conveyed by a written assignment cannot be revested in the assignor by a breach of contract on the part of the assignee, so as to enable the former to maintain a suit upon the patent. — Atkins *v.* Parke, 61 Fed. 953; 10 C. C. A. 189.

Hartell *v.* Tilghman, 99 U. S. 547.

§ 450. Assignor and Assignee — By Assignor.

An assignor of a territorial right to make and sell, may make and sell articles to be sold out of his territory, and a purchaser may buy with the understanding and purpose of selling the same out of the territory. — Keeler *v.* Standard, 157 U. S. 659; 39 L. Ed. 848; 15 S. Ct. 738.

Dissented to by Brown, Fuller and Field.

Goodyear *v.* Beverly, 1 Cliff. 348; Wilson *v.* Rousseau, 45 U. S. 688; Bloomer *v.* McQueewan, 55 U. S. 539; Mitchell *v.* Hawley, 83 U. S. 547; Adams *v.* Burks, 84 U. S. 453; Boesch *v.* Graff, 133 U. S. 698; Hobbie *v.* Jennison, 149 U. S. 355.

The grantor conveyed to the grantee rights held to be an assignment under the patent. Upon alleged failure of assignee to comply with the terms of the agreement the assignor began manufacturing under alleged right under the patent. Assignee brought suit for infringement, and on leave, assignor

filed a cross bill. The proofs showed that there was no default in the payment of royalty at the time the assignor attempted to cancel the contract. *Held:* that the cross bill cannot be maintained. — Atkins *v.* Parke, 61 Fed. 953; 10 C. C. A. 189.

§ 451. Assignor and Assignee — By Inventor-Assignor.

The defendant is not at liberty to urge the defense of invalidity in a suit upon his own patent against a party who derives title to that patent through him. It is clearly inequitable for a patentee to sell or assign his patent, and then, in a suit against him for infringement by his assignee, to set up that the patent is void for want of invention. The assignor of a patentable invention is estopped from denying the validity of the patent or his own title to the interest transferred. He cannot practise the invention contrary to the provisions of his assignment; and, when sued for infringement, he is not permitted to set up in his defense the invalidity of the patent or his own inability to convey it. — Woodward *v.* Boston, 60 Fed. 283; 8 C. C. A. 622.

2 Rob. Pat. 555; Walk. Pat. 469; Underwood *v.* Warren, 21 Fed. 573; Telegraph *v.* Carey, 22 Blatchf. 34, 19 Fed. 322; Parker *v.* McKee, 24 Fed. 808; Morey *v.* Jagger, 1 Blatchf. 372; Curran *v.* Burdsall, 20 Fed. 835; Burdsall *v.* Curran, 31 Fed. 918; Rumsey *v.* Buck, 20 Fed. 697.

The fact that the infringing machines were designed by the inventor of the patent in suit, and constructed according to his designs, and that they were made, used experimentally, and offered for sale by a co-defendant, in the absence of any further evidence creates such a presumption of privity between the parties that all are estopped from disputing the validity of the patent. — Woodward *v.* Boston, 60 Fed. 283; 8 C. C. A. 622.

Telegraph Co. *v.* Carey, 19 Fed. 322.

We find, therefore, that during the existence of the contract of 1889, Headley made banks precisely like those now complained of, marked them "Patented March 13th, 1888," and sold them to complainant's predecessor at a price per bank which included, not only the cost of production, but also a considerable royalty; that, upon application of this contract, he sold the same party a considerable number of the same banks, stamped in the same way, and received a price; that he gave to the same party a license to go on and manufacture the same bank which had been theretofore made by his firm, and received royalty on banks manufactured under that license. We are satisfied that now, when complainant has obtained title to this patent of March 13th, 1888, it does not lie in the mouth of Headley to assert, as against complainant, that the banks he used to stamp and sell as being within said patent are not infringement. — Piaget *v.* Headley, 108 Fed. 870; 48 C. C. A. 116.

Granting, they say, that Duncan is estopped from asserting that the claims are void for lack of invention or lack of novelty, he may nevertheless bring in the prior art to limit the claims and thus defeat the suit. Why one defense and not the other? They are of as like blood as brothers. One is somewhat larger than the other, is all. Lack of novelty defeats the complainant's title to the whole of the property within the metes and bounds of the claims. Limitation destroys his title, in part. If a stranger were occupying part, but not all, of the property described in the deed, he could answer, "I am not concerned with your title to the residue, but what I am occupying is not yours." The contention that Duncan can do likewise brings the estoppel to nothingness. Duncan's assignment, in fact and likewise by its very terms, was a conveyance not only of the franchise to exclude strangers,

but was also a conveyance of the inventions described in the claims. — Siemens-Halske *v.* Duncan, 142 Fed. 157; 73 C. C. A. 375.

§ 452. Avoidance — Adding Elements or Functions.

If appellees are using Fisk's invention as it is defined in the patent, it is immaterial how much of the prior art they also employ. — Western *v.* American, 131 Fed. 75; 65 C. C. A. 313.

That the fact that a device performs another function in addition to the function of the patent infringed does not avoid infringement, see American *v.* Wyeth, 139 Fed. 389; 71 C. C. A. 485.

It is, of course, immaterial that the defendant's device is operated through intermediate mechanism. Under these circumstances, to hold that the defendant's device does not infringe, we must limit the Felt device to mere details of construction. If the Felt invention were for a mere improvement, such a narrow construction might be warranted. — Comptograph *v.* Mechanical, 145 Fed. 331; 76 C. C. A. 205.

§ 453. Avoidance — Concealment and Subterfuge.

Ingenuity displayed in evading the salient feature of a patent and ingenuity displayed in covering up such salient point in an alleged improvement will be considered favorably in determining novelty. — Hoyt *v.* Horne, 145 U. S. 302; 36 L. Ed. 713; 12 S. Ct. 922.

Winans *v.* Denmead, 56 U. S. 330.

Infringement is not averted merely because the machine alleged to infringe may be differentiated from the patented machine, even though the invention embodied in the latter be not primary. — Continental *v.* Eastern, 210 U. S. 405; 51 L. Ed. 922; 28 S. Ct. 748.

The fact that a defendant uses a particular device to avoid infringement does not of itself constitute grounds of complaint. — Rose *v.* Hirsh, 77 Fed. 469; 23 C. C. A. 246.

A mere subterfuge resorted to to avoid infringement does not avail as a defense. — Rose *v.* Hirsh, 77 Fed. 469; 23 C. C. A. 246.

The court will look through the disguises, however ingenious, to see whether the inventive idea of the original patentee has been appropriated, and whether the defendant's device contains the material features of the patent in suit, and will declare infringement even when those features have been supplemented and modified to such an extent that the defendant may be entitled to a patent for the improvement. — Crown *v.* Aluminum, 108 Fed. 845; 48 C. C. A. 72.

Clough *v.* Mfg. Co. 106 U. S. 166: and 106 U. S. 178; Consolidated *v.* Crosby, 113 U. S. 157.

When the court is convinced that a meritorious invention has been made, it should not permit infringers to evade the patent on narrow and technical grounds. — Cimiotti *v.* American, 115 Fed. 498; 53 C. C. A. 230.

Proctor *v.* Bennis, 36 Ch. Div. 740; Machine Co. *v.* Murphy, 97 U. S. 120; Cantrell *v.* Wallick, 117 U. S. 689; Reece *v.* Globe, 61 Fed. 959; Blanchard *v.* Reeves, Fed. Cas. 1,515.

One may not escape infringement by adding to or subtracting from a patented device, by changing its form, or making it more or less efficient,

while he retains its principle and mode of operation, and attains its result by the use of the same or equivalent mechanical means. — Lourie *v.* Lenhart, 130 Fed. 122; 64 C. C. A. 456.

Sewall *v.* Jones, 91 U. S. 171; Coupe *v.* Weatherhead, 16 Fed. 673.

All the elements of the patent combination are employed with substantial identity in their use, and departure appears from the letter of the claims only, in the arrangement of these elements, without substantial difference in the principle of operation. The policy and rules of the patent law require that the patentee be protected against such evasions of the wording of a claim in form of nonessential details, when the substance of the invention is thus used and is unmistakably shown in the specification and claims. — Columbia *v.* Kokomo, 143 Fed. 116; 74 C. C. A. 310.

Winans *v.* Denmead, 15 How. 330; Ives *v.* Hamilton, 92 U. S. 426; Machine *v.* Murphy, 97 U. S. 120; Elizabeth *v.* Paving, 97 U. S. 126; Hoyt *v.* Horne, 145 U. S. 302; Westinghouse *v.* Boyden, 170 U. S. 537; International *v.* Brammer, 138 Fed. 396.

There is a constant tendency by those who seek to evade the claims of a patent to dwell too much on verbal refinements, and not enough on the reality and substance of the things to which the language of the claim refers. This tendency must be avoided in order to do justice to inventors, and it sometimes must be avoided in order to protect the public from too great scope of the monopoly claimed by the patentee. It is true that the law requires that precise invention of the patent should be described adequately in the claims, and, if the patentee has claimed less than he is obviously entitled to, as manifested in the specifications and drawings, he must suffer the consequences. But this requirement of the law only makes the caution above expressed the more necessary, and mere verbal refinement must not be allowed to obscure the real nature of the patented invention, if it can be fairly gathered from the language of the claims. — Robins *v.* American, 145 Fed. 923; 76 C. C. A. 461.

§ 454. Avoidance — Impairing Efficiency.

While the appellant has avoided a mere servile copy of form, he has appropriated the substance of the Dodge invention. That in doing so he has rendered inoperative the function of one groove will not suffice to relieve him from the charge of infringement. — Mitchell *v.* Ewart, 81 Fed. 390; 26 C. C. A. 443.

The fact that the set of several pulleys differs, in that it is more cumbersome, and involves delays, is only an ordinary feature of colorable infringements, which are characterized by a mere imitative capacity without the spirit of invention. — Heap *v.* Tremont, 82 Fed. 449; 27 C. C. A. 316.

An infringer cannot evade liability for his invention by deliberately diminishing its utility without changing materially its form, its chief function, or its manner of operation. — Penfield *v.* Chambers, 92 Fed. 630; 34 C. C. A. 579.

Sewing Machine *v.* Frame, 24 Fed. 596.

This is an instance, not infrequent in patent litigation, where the infringer has sought to evade the claims of a patent, the substance of which he is appropriating, by deliberately impairing the function of one element, without destroying the substantial identity of structure, operation and result. — King *v.* Hubbard, 97 Fed. 795; 38 C. C. A. 423.

Sewall *v.* Jones, 91 U. S. 171; Coupe *v.* Weatherhead, 16 Fed. 673; Machine Co. *v.* Binney, 24 Fed. Cas. 653.

§ 455. Avoidance — Improving Efficiency.

Superiority of quality or operation is not an avoidance of infringement. — Marsh *v.* Seymour, 97 U. S. 348; 24 L. Ed. 963.

§ 456. Avoidance — Omitting Element.

The law is well settled that there is no infringement of a patent which claims mechanical powers in combination, unless all the parts have been substantially used. The use of a part less than the whole is no infringement. — Eames *v.* Godfrey, 68 U. S. 78; 17 L. Ed. 547.

Prouty *v.* Ruggles, 16 Pet. 341.

Where the patent in suit covered, and the reissue limited it to, a specific process; and the alleged infringing process omitted the essential feature and element of said process, there is no infringement. — California *v.* Schalicke, 119 U. S. 401; 30 L. Ed. 471; 7 S. Ct. 391.

The fact that the defendant was able, by a skilful contrivance, to dispense with one of the elements of plaintiff's claim, the plaintiff's patent not being generic, does not make the device an infringement. — Derby *v.* Thompson, 146 U. S. 476; 36 L. Ed. 1051; 13 S. Ct. 181.

The stationary card shown at " E " in the drawing, is made in the eighth claim an essential part of the mechanism described. It may be that this card is unnecessary, but as Judge Wallace in his dissenting opinion in Cimiotti *v.* Nearseal, 115 Fed. 507 said: " the patent industriously makes the stationary cards, substantially as described, an element of the claim." — Cimiotti *v.* American, 198 U. S. 399; 49 L. Ed. 1100; 25 S. Ct. 697.

Unless the defendant's device contains the elements claimed or their mechanical equivalents, it is clear that the charge of infringement is not made out. — Wheaton *v.* Norton, 70 Fed. 833; 17 C. C. A. 447.

Modfg. Norton *v.* Jensen, 49 Fed. 859.

McCormick *v.* Talcott, 20 How. 402; Vance *v.* Campbell, 1 Black, 427; Schumacher *v.* Cornell, 96 U. S. 554.

That omitting to use parts of a structure, but using the combination, does not avoid infringement, see Clinton *v.* Hendrick, 86 Fed. 137; 29 C. C. A. 612.

This principle, however, is qualified by another principle, which is that the absent element must be an essential one, and that the substitute for it must not be a mechanical equivalent for it. — Dowagiac *v.* Minnesota, 118 Fed. 136; 55 C. C. A. 86.

McSherry *v.* Dowagiac, 101 Fed. 716.

The defendant used the combination of the patent, but claimed that one of the elements necessary to the combination of the patent did not contribute to the function of the machine, and thus no infringement existed in fact. *Held:* Unnecessary to consider whether its idler wheel can be taken out and leave the machine operative minus the function of the idler. If infringement thus appears, the owner of the patent cannot be denied relief, though protection may be limited by the terms of the claims to such three-wheel form. — Columbia *v.* Kokomo, 143 Fed. 116; 74 C. C. A. 310.

Du Bois *v.* Kirk, 158 U. S. 58.

It was urged that, as the infringing machine did not embody certain functional advantages recited in the specifications and urged in the Patent Office, infringement could not be established. *Held:* No doubt this functional advantage was claimed in argument in the Patent Office, and not a little made of it there. And it was also put into the specifications, where it now appears, before the patent was allowed. But at the most it is merely descriptive of the supposed action of the machine, and not a limitation upon it, to which the inventor committed himself; there being no amendment or restatement of the claims by which the invention was defined. It is the mechanical combination there specified which is patented, and not the particular functions or advantages claimed for the different parts; and infringement is not escaped where there is a substantial appropriation of the mechanical construction, even though, by slight variations, unimportant changes in the mode of operation may be made. — American *v.* Mills, 149 Fed. 743; 79 C. C. A. 449.

If for any reason the defendants are enabled to dispense with one of the elements of the claim, or, to speak more accurately, with one step of the process, they cannot be held as infringers. — Universal *v.* Sonn, 154 Fed. 665; 83 C. C. A. 422.

As we have seen, this restraining shoulder of the annular plate is of the very gist of the device. Discard it or its function in substantial form, and we do not obtain the result that makes Nolan's device useful and patentable. — Westinghouse *v.* Prudential, 158 Fed. 987; 86 C. C. A. 434.

But while the requirement of an additional passage-way may have been necessary, the patentee does not make it an element of his claims. The defendant's device does not possess it, or its equivalent. Consequently, while the defendant's construction may accomplish the same purpose as that of the complainant's, it does not infringe. — Consolidated *v.* Landers, 610 Fed. 79; 87 C. C. A. 235.

Wright *v.* Yuengling, 155 U. S. 52.

A combination is not infringed unless all of its elements as they are claimed are used, whether they are essential or not. — Portland *v.* Hermann, 160 Fed. 91; 87 C. C. A. 247.

Royer *v.* Schultz, 28 Fed. 850; Snow *v.* Lake Shore, 18 Fed. 602.

No device can be held to infringe a combination claim unless it employs all the elements of it. — Union *v.* Diamond, 162 Fed. 148; 89 C. C. A. 172.

Ciniotti *v.* American, 198 U. S. 399; Brammer *v.* Witte, 159 Fed. 726; Portland *v.* Hermann, 160 Fed. 91.

§ 457. Avoidance — Transposition of Parts.

The appellants have transposed the position of the parts. Do they escape infringement thereby? We think not. The appellants have appropriated the gist of the invention. The changes found in their device do not at all affect either the principle of operation or the result. — Devlin *v.* Paynter, 64 Fed. 398; 12 C. C. A. 188.

Winans *v.* Denmead, 15 How. 330; Machine *v.* Murphy, 97 U. S. 120; Hoyt *v.* Horne, 145 U. S. 302.

The transposition of resiliency between stud and socket would surely suggest itself to a mind of ordinary intelligence. Such a trivial alteration, the fundamental structure of the socket member remaining unchanged, would

not avoid infringement. — Consolidated *v.* Hays, 100 Fed. 984; 41 C. C. A. 142.

A transposition of parts or of motion will not negative infringement when the same result is obtained in substantially the same way. — International *v.* Bundy, 159 Fed. 464; 86 C. C. A. 494.

Consolidated *v.* Hays, 100 Fed. 984.

§ 458. Avoidance — Miscellaneous Conditions.

Therefore it follows that, while the complainant has a title to old elements as combined in his particular device, to accomplish certain results, the respondents have an equal right to avail themselves of all the same elements in their particular device to accomplish other special results, so long as it is apparent, as is the fact in the case at bar, that what they did could not justly be held to be an intended piracy under the color of apparent differences. — Davey *v.* Prouty Co. 107 Fed. 505; 46 C. C. A. 439.

That the fact that an infringer uses an inferior form of construction, so long as the combination of the patent is employed, does not avoid the act, see Cazier *v.* Mackie-Lovejoy, 138 Fed. 654; 71 C. C. A. 104.

§ 459. Change of Form — Colorable.

It is a well settled principle of law, that the mere change in the form of the machinery (unless a particular form is specified as the means by which the effect described is produced) or an alteration in some of its essential parts, or in the use of known equivalent powers, not varying essentially the machine, or its mode of operation or organization, will not make the new machine a new invention. It may be an improvement upon the former; but that will not justify its use without the consent of the first patentee. — O'Reilly *v.* Morse, 15 How. 62; 14 L. Ed. 601.

The patentee having described his invention and shown its principles, and claimed it in that form which most perfectly embodies it, is deemed to claim every form in which his invention may be copied. — Winans *v.* Denmead, 15 How. 330; 14 L. Ed. 717.

The property of inventors would be valueless if it were enough for the defendant to say, your improvement consisted in a change of form; I have not taken that, and so do not infringe. — Winans *v.* Denmead, 15 How. 330; 14 L. Ed. 717.

Upon well established principles of patent law, a change of form and not of substance constitutes no defense to a bill for an infringement. — Morey *v.* Lockwood, 75 U. S. 230; 19 L. Ed. 339.

Curt. Pat. 260, 261, 264.

If he has taken the same plan and applied it to the same purpose, notwithstanding he may have varied the process of application, his manufacture will be substantially identical with that of the patentee. — Sewall *v.* Jones, 91 U. S. 171; 23 L. Ed. 275.

Curtis, sec. 312; Walton *v.* Potter, Web. P. C. 385, 607.

It is difficult to read the schedules of the parties in the presence of the models, and resist the conviction that the appellant has carefully studied the invention of the appellees as described in their reissue, not with any view

to its improvement, but solely for the purpose of evasion. — Hyndman *v.* Roots, 97 U. S. 224; 24 L. Ed. 975.

No one can avoid infringement simply by means of ingenious diversities of form and proportion, presenting simply the appearance of something unlike the patented machine. It is well settled that a copy of the principle or mode of operation described in the prior patent is an infringement of it. If the patentee's ideas are found in the construction and arrangement of the subsequent device, no matter what may be its form, shape or appearance, the parties making or using it are deemed appropriators of the patented invention, and are infringers. An infringement takes place whenever a party avails himself of the invention of the patentee without such a variation as constitutes a new discovery. — Norton *v.* Jensen, 49 Fed. 859; 1 C. C. A. 452.

Blanchard *v.* Beers, 2 Blatchf. 416; Tatham *v.* LeRoy, 2 Blatchf. 486; Winans *v.* Denmead, 15 How. 343; Potter *v.* Schenck, 1 Biss. 518.

Yet, notwithstanding these changes and some others, the defendant really has copied the substance of the inventions in different forms. In principle the two machines are alike, and they accomplish the same result. — Rogers *v.* Mergenthaler, 64 Fed. 799; 12 C. C. A. 422.

The owner of a patent, though the claim be limited, is to be protected from mere colorable changes in matter of pure form. — McDowell *v.* Kurtz, 77 Fed. 204; 23 C. C. A. 119.

The substitution of one for the other in this combination, works no new or different result whatever. The first claim of the patent does not name "fixed" switch-tracks. The change in the mere form of the switching device which the defendants have adopted is altogether immaterial. The changed form embodies the invention described and claimed. There is substantial identity between these two coasting structures. In this class of cases, we have repeatedly held that such mere formal changes are unavailing to avoid infringement. — Thompson *v.* Second Avenue, 93 Fed. 824; 35 C. C. A. 620.

Winans *v.* Denmead, 15 How. 330; Devlin *v.* Paynter, 64 Fed. 398; Hillborn *v.* Mfg. Co. 69 Fed. 958; McDowell *v.* Kurtz, 77 Fed. 206.

Bundy prints by pressing his record strip against the type, while defendant prints by pressing the type down upon the recording strip. That the printing is done by a blow delivered by Bundy's "hammer," and by pressure only in the device of the defendant, is not material. Both methods of printing were well known and one is the full equivalent of the other. — Bundy *v.* Detroit, 94 Fed. 524; 36 C. C. A. 375.

Neither was it invention to cause the printing to be done by pressing the type down upon the paper strip instead of pressing the paper strip against the type. The one was the plain equivalent of the other. That defendant's impression mechanism is not in the form or shape of a hammer, is of no consequence unless the form itself is of the essence of the invention. — Bundy *v.* Detroit, 94 Fed. 524; 36 C. C. A. 375.

Winans *v.* Denmead, 15 How. 330; Machine Co. *v.* Murphy, 97 U. S. 120.

The mere change of the location of the parts of a combination, if the parts still perform the same duty, and by the same mode of operation, will not take the structure out of the bounds of the patent. — Union *v.* Battle Creek, 104 Fed. 337; 43 C. C. A. 560.

Northwestern *v.* New Haven, 28 Fed. 234; Roiler Mill *v.* Coombs, 39 Fed. 25; Knox *v.* Mining Co. 6 Sawy. 430; Devlin *v.* Paynter, 64 Fed. 398.

If, however, such change of size, form or location effect a change in the principle or mode of operation, such as breaks up the relation and coöperation of the parts, this results in certain change in the means as displaces the conception, and takes the new structure outside of the patent. — Union *v.* Battle Creek, 104 Fed. 337; 43 C. C. A. 560.

Brooks *v.* Fisk, 15 How. 212; Mfg. Co. *v.* Brill, 54 Fed. 380; Gould *v.* Rees, 15 Wall. 187.

The fact that the two machines differ slightly as to the distance from each other of the intermeshing teeth cannot, we think, be very material. — Krajewski *v.* Pharr, 105 Fed. 514; 44 C. C. A. 572.

Potts *v.* Creager, 155 U. S. 597; Roller-Mill Co. *v.* Coombs, 39 Fed. 25; Schroeder *v.* Brammer, 98 Fed. 880; Beach *v.* Box-Machine Co., 63 Fed. 597; Mfg. Co. *v.* Beach, 18 C. C. A. 165; Westinghouse *v.* Power-brake Co., 170 U. S. 537.

Mere changes of the form of a device or of some of the mechanical elements of a combination secured by patent will not avoid infringement, where the principle or mode of operation is adopted, unless the form of the machine or of the elements changed is the distinguishing characteristic of the invention. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

Watch Co. *v.* Robbins, 64 Fed. 384; New *v.* Bevin, 64 Fed. 859.

Mere changes in the form of a device or of some of the mechanical elements of a combination secured by a patent will not avoid infringement, where the principle or mode of operation is adopted, unless the form of the machine or of the elements changed is the distinguishing characteristic of the invention. — Kinloch *v.* Western, 113 Fed. 652; 51 C. C. A. 369.

National *v.* Interchangeable, 106 Fed. 693; Watch Co. *v.* Robbins, 64 Fed. 384; New Departure *v.* Bevin, 64 Fed. 859.

It is a rule of law that one does not escape liability for infringement by changing the form or dimensions of the parts of a patented combination, where such change does not break up or essentially vary the principle or mode of operation pervading the original invention. — Dowagiac *v.* Superior, 115 Fed. 886; 53 C. C. A. 36.

Cochrane *v.* Deener, 94 U. S. 787; Morey *v.* Lockwood, 8 Wall. 230; Elizabeth *v.* Pavement, 97 U. S. 126; Loom Co. *v.* Higgins, 105 U. S. 585; Penfield *v.* Chambers, 92 Fed. 630; Bundy *v.* Detroit, 94 Fed. 524; King *v.* Hubbard, 97 Fed. 795; McSherry *v.* Dowagiac, 101 Fed. 716; Taylor *v.* Spindle Co. 75 Fed. 301; National *v.* Interchangeable, 106 Fed. 693.

Mere change in the form of a device, or of some of the mechanical elements of a combination, will not avoid infringement, where the principle or mode of operation is adopted, except in those rare cases where the form of the improvement or of the element changed is the distinguishing characteristic of the invention. — Ide *v.* Trorlicht, 115 Fed. 137; 53 C. C. A. 341.

National *v.* Interchangeable, 106 Fed. 693; Watch Co. *v.* Robbins, 64 Fed. 384; New Departure *v.* Bevin, 64 Fed. 859.

Note: This is a loose statement. If the changed element were a non-equivalent the infringement would be avoided.

By changing the form of the parts of complainant's combination, and not essentially varying the principle or mode of operation pervading the original invention, defendant cannot escape infringement. — Dowagiac *v.* Minnesota, 118 Fed. 136; 55 C. C. A. 86.

Dowagiac *v.* Superior, 115 Fed. 886; Cochrane *v.* Deener, 94 U. S. 787; Morey *v.* Lockwood, 8 Wall. 230; Elizabeth *v.* Pavement, 97 U. S. 126; Loom Co. *v.* Higgins, 105 U. S. 585; Penfield *v.* Chambers, 92 Fed. 630; Bundy *v.* Detroit, 94 Fed. 524; Ax *v.* Hubbard, 97 Fed. 795; McSherry *v.* Dowagiac, 101 Fed. 716; Taylor *v.* Spindle, 75 Fed. 301; National *v.* Interchangeable, 106 Fed. 693.

Form, location or sequence of elements are all immaterial, unless form or location or sequence is essential to the result, or indispensable, by reason of the state of the art, to the novelty of the claim. — Adam *v.* Folger, 120 Fed. 260; 56 C. C. A. 540.

Winans *v.* Denmead, 15 How. 330; Reece *v.* Globe, 61 Fed. 958; Bundy *v.* Detroit, 94 Fed. 524; Extraction Co. v. Brown, 104 Fed. 345; Norton *v.* Jensen, 49 Fed. 859; Consolidated *v.* Crosby, 113 U. S. 157; Hoyt *v.* Horne, 145 U. S. 302.

A valid patent monopoly cannot be evaded by such substitution or change of form, except through the terms of the grant, express or implied, limiting the invention to the special means and form shown in the patent. — Austin *v.* American, 121 Fed. 76; 57 C. C. A. 330.

Mere changes in the form of a patented device, where the principle or mode of operation is adopted, will not avoid infringement, unless the form of the machine is the distinguishing characteristic of the invention. — Lourie *v.* Lenhart, 130 Fed. 122; 64 C. C. A. 456.

National *v.* Interchangeable, 106 Fed. 693; Kinloch *v.* Western, 113 Fed. 659.

The making of the arm in a more bulging shape and less useful does not avoid infringement. — Milner *v.* Yesbera, 133 Fed. 916; 67 C. C. A. 210.

Penfield *v.* Chambers, 92 Fed. 630; Chicago *v.* Bush, 2 Biss. 472; Roberts *v.* Harnden, 2 Cliff. 506.

That a mere change of form does not avoid infringement even if the change of form is a distinct improvement, see American *v.* Sexton, 139 Fed. 564; 71 C. C. A. 548.

This shaping of the packing is done deliberately by the seller, and by so doing he secures all the advantages of the Bradley packing, or, at least, all the advantages which can be secured by apparently inferior material. If the same result was produced by forming the packing in a press constructed on the same lines as the coupling, removing the packing therefrom and riveting it to the jaw of the coupling, it is manifest that infringement would be established. And yet, in effect, this is precisely what is done; the necessity of a separate press being avoided by using the coupling for that purpose. — Eccles *v.* Bradley, 158 Fed. 98; 85 C. C. A. 566.

It matters not that the devices may differ in form, in appearance and in the manner of operation; if they combine to do the same work in substantially the same way it is enough. — Hillard *v.* Fisher, 159 Fed. 439; 86 C. C. A. 469.

This court has repeatedly held that mere formal changes where there is substantial identity are unavailing to escape infringement. — Delaware *v.* Shelby, 160 Fed. 928; 88 C. C. A. 110.

Mitchell *v.* Ewart, 81 Fed. 390; Thompson *v.* Second Ave., 93 Fed. 824; Smeeth *v.* Perkins, 125 Fed. 285; Ives *v.* Hamilton, 92 U. S. 431; Elizabeth *v.* Pavement, 97 U. S. 137; Hoyt *v.* Horne, 145 U. S. 302.

§ 460. Change of Form — Location.

A segment has been omitted. That which remains performs the function of the complete ring, perhaps not so well as if the ring had been completed.

But the impairment of the function of this hollow ring by omitting a short segment will not escape infringement. — Nathan *v.* Howard, 143 Fed. 889; 75 C. C. A. 97.

King *v.* Hubbard, 97 Fed. 795; Winans *v.* Denmead, 15 How. 330.

A person making, using, or selling the patented device (a hose supporter) would infringe, and he would not be permitted to escape on the plea that it was intended for use on an underwaist or a belt. It follows, as a necessary corollary, that such a structure in the prior art will anticipate irrespective of its connection, use or lack of use. — Parramore *v.* Siegel-Cooper, 143 Fed. 516; 74 C. C. A. 386.

§ 461. Change of Form — Modification.

Infringement cannot ordinarily be escaped by merely cutting in two a device made in one piece, or by making integral an article formerly made in two. — Standard *v.* Caster, 113 Fed. 162; 51 C. C. A. 109.

Bundy *v.* Detroit, 94 Fed. 524.

The Peckham invention is not obscured by the change, which does not affect its distinguishing feature or the leading purpose thereof, — that of keeping the furrow clear, — though it modifies to some extent the manner of effecting the distribution of the seed in the furrow. — Dowagiac *v.* Superior, 115 Fed. 886; 53 C. C. A. 36.

Electric *v.* LaRue, 139 U. S. 601; Cochrane *v.* Deener, 94 U. S. 780.

§ 462. Change of Form — Number of Parts.

The device goes further than to make mere formal changes in the complainants' patent. Its deviations therefrom do not consist in the mere transposition of parts, but it introduces such change in the construction of parts as to avoid the elements of complainants' invention, limited as we have found the same to be by the pre-existing devices. These differences, slight as they may be, are, in our judgment, as great as the changes, which the complainant made in adopting the former devices, and are sufficient to relieve the defendant of the charge of infringement. — Vulcan *v.* Smith, 62 Fed. 444; 10 C. C. A. 493.

But the rule that changes of form do not avoid infringement has at least two exceptions — when the form of the mechanical element is the distinguishing characteristic of the invention, and when the change in the form of the element changes the principle or mode of operation of the combination. — Jewell *v.* Jackson, 140 Fed. 340; 72 C. C. A. 304.

§463. Change of Material.

Where applicant claimed use of soft metal pin specifically, the use of safety pins being old, not infringement to employ a hard cast iron safety pin to perform same function. — Gates *v.* Fraser, 153 U. S. 332; 38 L. Ed. 734; 14 S. Ct. 883.

Now, the fibrous asbestos wool which the defendant employed in making his sealing compound may not be produced by grinding mechanism; but it is a finely divided fibrous material, not differing in appearance or otherwise from the fibrous material of the Coddington invention. To all intents and purposes, it is the "finely-ground fibrous material" of the patent. — Propfe *v.* Coddington, 108 Fed. 86; 47 C. C. A. 218.

§ 464. Combinations — Adding Elements.

When several elements, no one of which is novel, are united in a combination which is the subject of a patent, and these several elements are thereafter united with another element into a new combination, and this new combination performs a work which the patented combination could not, there is no infringement. — U. S. *v.* Berdan, 156 U. S. 552; 39 L. Ed. 530; 15 S. Ct. 420.

One who appropriates a new and valuable patented combination cannot escape infringement by uniting or operating those elements by means of appropriate mechanical devices which differ from those which are pointed out for that purpose, but which are not claimed in the patent. — Brammer *v.* Schroeder, 106 Fed. 918; 46 C. C. A. 41.

Deering *v.* Harvester Works, 155 U. S. 286; City of Boston *v.* Allen, 91 Fed. 248.

§ 465. Combinations — Concealment or Subterfuge.

The purpose, principle and operation of the machines are the same, and the defendant escapes exact similitude of construction to the plaintiff's only by a few alterations. It is not a case of using the elements of a combination less than all. It is a case of using the same number of elements, and altering the form of one and not materially altering the relation of any of the others. — Consolidated *v.* Pacific, 53 Fed. 385; 3 C. C. A. 570.

§ 466. Combinations — Construction of.

While under sec. 9, ch. 45, act 1837 (see amended law sec. 4922 R. S. Act 1870) excessive claims do not defeat a suit, this provision cannot be applied to the present case, for, unless the combination is maintained, the whole of the invention fails. The combination is an entirety; if one of the elements is given up, the thing claimed disappears. — Vance *v.* Campbell, 66 U. S. 427; 17 L. Ed. 168.

A combination of elements, not the equivalents of his, would be a different machine, and consequently not an infringement. By his patent he appropriated to himself only as much of the field of invention which his idea embraced, as the machine he described in his specification and claimed in his application covered. — Wicke *v.* Ostrum, 103 U. S. 461; 23 L. Ed. 409.

A claim must be limited to the elements claimed, or their equivalents. — Gage *v.* Herring, 107 U. S. 640; 27 L. Ed. 601; 2 S. Ct. 819.

Water *v.* Desper, 101 U. S. 332; Eames *v.* Godfrey, 1 Wall. 78; Murray *v.* Clayton, L. R. 10 Ch. 675; Clark *v.* Adie, L. R. 10 Ch. 667.

The claims of the patents sued on in this case are claims for combinations. In such a claim if the patentee specifies any element as entering into the combination, either directly by the language of the claim or by such a reference to the descriptive part of the specification as carries such elements into the claim, he makes such element material to the combination, and the court cannot declare it to be immaterial. It is his province to make his own claim and his privilege to restrict it. If it be a claim to a combination and be restricted to specified elements, all must be regarded as material, leaving open only the question, whether an omitted part is supplied by an equivalent device or instrumentality. — Fay *v.* Cordesman, 109 U. S. 408; 27 L. Ed. 979; 3 S. Ct. 236.

Water *v.* Desper, 101 U. S. 332; Gage *v.* Herring, 107 U. S. 640.

§ 467. Combinations — Different Combination, Same Result.

Combinations effecting similar results by similar means, but employing different precedent conditions, are not necessarily identical or equivalent. — National *v.* Wheeler, 79 Fed. 432; 24 C. C. A. 663.

If the combination of a defendant shows a mode of operation substantially different from that of the complainant, infringement is avoided even though the result of the operation of each is the same. — Brammer *v.* Witte, 159 Fed. 726; 86 C. C. A. 207.

Cimiotti *v.* American, 198 U. S. 399; Brooks *v.* Fiske, 15 How. 211; Union *v.* Battle Creek, 104 Fed. 337.

§ 468. Combinations — Equivalents.

Mere formal alterations of a combination in letters patent do not constitute any defense to the charge of infringement, as the inventor of a combination is as much entitled to suppress every other combination of the same ingredients to produce the same result, not substantially different from what he had invented and caused to be patented, as the inventor of any other patented improvement. Such inventors may claim equivalents as well as any other class of inventors. — Rees *v.* Gould, 82 U. S. 187; 21 L. Ed. 39.

Seymour *v.* Osborne, 11 Wall. 555.

Whether one device is or is not an equivalent for another, is usually a question of fact, and often becomes a difficult issue to decide. Grave doubts were at one time entertained whether the patentee of an invention consisting of a combination of old ingredients was entitled to equivalents, but it is now well settled that he is just as much as the patentee of any other class of inventions; but it is very important to understand what is meant by an equivalent of an ingredient in such a combination. Questions of this kind usually arise in comparing the machine of the defendant, in a suit for infringement, with that of the plaintiff, and the rule is that if the defendant omits entirely one of the ingredients of the plaintiff's combination, without substituting any other, he does not infringe, and if he substitutes another in the place of the one omitted, which is new or which performs a substantially different function, or even if it was old but was not known at the date of the plaintiff's patent as a proper substitute for the omitted ingredient, it does not infringe. — Gill *v.* Wells, 89 U. S. 1; 22 L. Ed. 699.

Carver *v.* Hyde, 16 Pet. 514; Brooks *v.* Fiske, 15 How. 212; Stimpson, *v.* R. R. 10 How. 329; Prouty *v.* Ruggles, 16 Pet. 341.

Alterations in a combination which are merely formal do not constitute a defense to the charge of infringement, as the inventor of a new and useful combination of old ingredients is as much entitled to claim equivalents as any other class of inventors, but they cannot suppress subsequent improvements which are substantially different from their combinations, whether the new improvement consists in a new combination of the same ingredients or of some newly discovered ingredient, or even of some old ingredient performing some new function not known at the date of the letters patent as a proper substitute for the ingredient withdrawn. — Gill *v.* Wells, 89 U. S. 1; 22 L. Ed. 699.

Taken by themselves, as separate pieces of machinery, they are not the same, and the one is not an infringement of a patent for the other. — Cochrane *v.* Deener, 94 U. S. 780; 24 L. Ed. 139.

Curtis, sec. 332; Foster *v.* Moore, 1 Curt. C. C. 279.

Alterations or modifications of combinations by substitution of equivalents does not avoid infringement. — Fuller *v.* Yentzer, 94 U. S. 299; 24 L. Ed. 107.

A party who merely substitutes an old ingredient for one of the ingredients of the patent is an infringer if the substitute performs the same function as the ingredient for which it was substituted, and it appears that it was well known at the date of the patent that it was applicable to that use. — Imhauser *v.* Buerk, 101 U. S. 647; 25 L. Ed. 945.

Gill *v.* Wells, 22 Wall. 1, 28.

An inventor is entitled to the benefit of all the mechanical equivalents of his several elements, known at the time of his invention, if used in the same combination. — Wicke *v.* Ostrum, 103 U. S. 461; 26 L. Ed. 409.

Clough was the first person who applied a valve regulation of any kind to the combination to which he applied it; and the first person who made such combination; and he is entitled under the decisions heretofore made by this court to hold as infringements all valve regulations applied to such a combination, which performs the same office in substantially the same way as, and were known equivalents for, his form of valve regulation. — Clough *v.* Gilbert, 106 U. S. 166; 27 L. Ed. 138; 1 S. Ct. 198.

A combination may be infringed when some of the elements are employed and for the others mechanical equivalents are used which were known to be such at the time when the patent was granted. — Rowell *v.* Lindsey, 113 U. S. 97; 28 L. Ed. 906; 5 S. Ct. 507.

Seymour *v.* Osborne, 11 Wall. 516; Gould *v.* Rees, 15 Wall. 187; Imhauser *v.* Buerk, 101 U. S. 647.

When complainant's claim covers a specific construction and claims as an element of a combination a groove, and defendant employs an artificial ridge to perform the same function, the narrowness of complainant's invention precludes equivalency. — Forncrook *v.* Root, 127 U. S. 176; 32 L. Ed. 97; 8 S. Ct. 1247.

Gage *v.* Herring, 107 U. S. 640.

The claim is in terms, for mechanism " combined with " other mechanisms. It is true that certain particular mechanism is mentioned, but it does not necessarily result that the patentee intended to limit the claim to any special devices, or that the law will so restrict it. — National *v.* American, 53 Fed. 367; 3 C. C. A. 559.

It is a combination of five elements. The infringing device is also a combination of five elements, and four of them, it is conceded, resemble four elements of the plaintiff's combination. In the fifth element, the bell crank lever acting as a toggle joint was the equivalent of the friction rollers. — Consolidated *v.* Pacific, 53 Fed. 385; 3 C. C. A. 570.

It is urged that a combination claim composed of old elements is not infringed by using one of its elements less than all. But the qualification must be added that no equivalent be substituted for the omitted element. — Consolidated *v.* Pacific, 53 Fed. 385; 3 C. C. A. 570.

A charge of infringement cannot be overcome by the substitution of a well-known equivalent for one element in a patented combination, although the result of the working of the combination as a whole may be slightly dif-

ferent, especially when no new or useful result is obtained, and the only effect is the production of an inferior device. — Standard *v.* Osgood, 55 Fed. 583; 7 C. C. A. 382.

The rule, prima facie, is that, while the use of equivalents for an element in a combination is not lawful, yet a combination which does not include all the elements does not infringe. There may be exceptions where the nature of the invention is of such a primary or broad character that it is plain some of the elements named are unessential; in other words, where the invention is so broad that the range of equivalents will be correspondingly broad, under the liberal construction which the courts give to such inventions. — DeLoriea *v.* Whitney, 63 Fed. 611; 11 C. C. A. 355.

Miller *v.* Mfg. Co. 151 U. S. 207; Meter Co. *v.* Desper, 101 U. S. 332; Fay *v.* Cordesman, 109 U. S. 408; Knapp *v.* Morss, 150 U. S. 221; Dunham *v.* Mfg. Co. 154 U. S. 103.

This is not a case of an integral thing made in parts, and then combined so as to constitute but one integer, operating in the same way as if constructed as a unit. In this connection it is necessary to observe the wide distinction which prevails between inventions of specific devices and inventions of combinations. In the former a much wider range of equivalents is recognized. In the latter the range is limited, and an element is not an equivalent unless it is substantially the same thing as the patentee has described, operating in the same way. We do not say what the result might be if the patentee makes his description of the elements of his combination broad enough to include in each or any of them any kind of mechanism adapted to produce the same results as a step in the operation. — Wells *v.* Curtis, 66 Fed. 318; 13 C. C. A. 494.

Rob. Pat. sec. 254; Caster Co. *v.* Spiegel, 133 U. S. 360.

In combinations, the doctrine of equivalents is construed most strongly against him who alleges infringement, and each party is held to his own element or device, or a positive and exact equivalent which performs the same function in the same manner; the burden being upon the complainant to show this. — Erie *v.* American, 70 Fed. 53; 16 C. C. A. 632.

To support the charge of infringement of a combination it must show use substantially of the same combination, including every one of the elements, or a mechanical equivalent for every one that is omitted. — Erie *v.* American, 70 Fed. 58; 16 C. C. A. 632.

One who appropriates a new and valuable patented combination cannot escape infringement by uniting or operating its elements by means of mere mechanical devices which differ from those which are pointed out for that purpose, but which are not claimed in the patent. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

Deering *v.* Harvester Works, 155 U. S. 286; City of Boston *v.* Allen, 91 Fed. 248; Schroeder *v.* Brammer, 98 Fed. 880.

One who merely makes and secures a patent for a slight improvement on an old device or combination, which performs the same function before as after the improvement, is protected against those only who use the very device or improvement he describes and claims or mere colorable evasions of it. In other words, the term "mechanical equivalent" when applied to the interpretation of a pioneer patent, has a broad and generous signification; but where it is applied to a slight and almost immaterial improvement, in the

progress of an art, it has a very narrow and limited meaning. — Bramner *v.* Schroeder, 106 Fed. 918; 46 C. C. A. 41.

Adams *v.* Lindell, 77 Fed. 432; Stirrat *v.* Mfg. Co., 61 Fed. 980; McCormick *v.* Talcott, 20 How. 402; Railway Co. *v.* Sayles, 97 U. S. 554.

One who claims and secures a patent for a new machine or combination, thereby necessarily claims and secures a patent for every mechanical equivalent for that device or combination, because, within the meaning of the patent law, every mechanical equivalent of a device is the same thing as the device itself. Moreover, in determining what is a mechanical equivalent of a given device, where, as in the case at bar, form is not the essence of the invention, forms and names are of little significance. The similarities and differences of machines and combinations are to be determined by the offices or functions which they perform, by the principles on which they are constructed, and by the modes which are used in their operation. A device which is constructed on the same principle, which has the same mode of operation, and which accomplishes the same result as another by the same or by equivalent mechanical means, is the same device, and a claim in a patent of one such device claims and secures the other. — Kinloch *v.* Western, 113 Fed. 652; 51 C. C. A. 362.

Machine Co. *v.* Murphy, 97 U. S. 120.

The patents are not for methods, but for particular mechanisms. As such, like all machine patents, they are entitled to a fair construction, and to one that will fully secure to the inventor the monopoly of his real invention, any device or combination which accomplishes the same result, by substantially the same means, will be held an invasion of that monopoly. Care must be taken, however, in all cases, that we do not by an uncalled for application of the doctrine of equivalents, practically give to the patentee a monopoly of the function of the mechanism. This, of course, we are not permitted to do, directly or indirectly. — Bryce *v.* National, 116 Fed. 186; 53 C. C. A. 611.

The use of a different, but mechanically equivalent, method or material to construct some of the elements of a patented combination will not avoid infringement where the principle or mode of operation is adopted, and the elements, when completed, perform the functions by the same means as, or by mechanically equivalent means to, those described in the patent. — Anderson *v.* Collins, 122 Fed. 451; 58 C. C. A. 669.

Ide *v.* Trorlicht, 115 Fed. 137; National *v.* Interchangeable, 106 Fed. 693; Watch *v.* Robbins, 64 Fed. 384; New Departure *v.* Bevin, 64 Fed. 859.

The patent is granted for the combination, as "the particular means devised by the inventor by which that result is attained," and the patentee is entitled to protection against any use of the same combination of elements, combined in the same way, so that each element performs the same function, or against substantially the same use with deviations which are merely colorable. But each of these well-known elements remains open to the use of subsequent inventors for a different combination for like results. — Milwaukee *v.* Brunswick-Balke, 126 Fed. 171; 61 C. C. A. 175.

Electric *v.* Hall, 114 U. S. 87.

He has devised an organism by which the desired result can be attained without the employment of this essential constituent of the patented construction; and to deny him the right to make, use, or vend that organism would be to accord to the appellees a monopoly, not only of the means which they described and claimed, but also of the end which they effected, even

when achieved by means materially different. Such a monopoly, of course, is not obtainable under the patent laws. — Mahoney *v.* Jenkins, 138 Fed. 404; 70 C. C. A. 662.

If no one can be held to infringe a patent for a combination unless he uses all the parts of the combination and the same identical machinery as that of the patentee, then will no patent for a combination ever be infringed; for certainly no one capable of operating a machine could be incapable of adopting some formal alteration in the machine or of substituting mechanical equivalents. It is true no one infringes a patent for a combination who does not employ all the ingredients of the combination; but if he employs all the ingredients, or adopts mere formal alterations, or substitutes for one ingredient another which performs substantially the same function as the one withdrawn, he does infringe. — International *v.* Brammer, 138 Fed. 396; 71 C. C. A. 633.

We have had frequent occasion in this court to pass upon the equivalency of mechanical devices, and we have never held that so slight a change (a mere change of form) as that indicated above in one of the parts of the machine would deprive the owner of the benefit of his patent. — American *v.* Sexton, 139 Fed. 564; 71 C. C. A. 548.

Columbus *v.* Robbins, 64 Fed. 334; McSherry *v.* Dowagiac, 101 Fed. 716; McCormick *v.* Aultman, 69 Fed. 371; Bundy *v.* Detroit, 94 Fed. 524; Dowagiac *v.* Superior, 115 Fed. 886; Eames *v.* Worcester, 123 Fed. 67.

§ 469. Combinations — Identity.

In order to constitute an infringement, the whole combination must be used, because he claims not the various parts, but the whole combination together. — Case *v.* Brown, 69 U. S. 320; 17 L. Ed. 817.

Where the device of the patent in suit showed a duplication of parts, viz. a double time movement to control the lever which controls the dog, and the infringing device uses the single combination, such omission does not avoid infringement. — Yale *v.* Berkshire, 135 U. S. 342; 34 L. Ed. 168; 10 S. Ct. 884.

Every element of the combination must be used as patented, or the entire result is changed, and the machine sought to be held as infringing is a different one. — Jones *v.* Munger, 49 Fed. 61; 1 C. C. A. 158.

Vance *v.* Campbell, 1 Black, 427.

We find the patent to be for a combination of well-known devices, but producing a new and useful result, and entitled to letters patent. But while the law recognizes the patentability of such combination of known devices, it patents the entire combination of the elements and not any single element of it, or any combination containing any other or different elements. The patent must be considered to be for the entire apparatus, and in order to claim damage for infringement, it is necessary to show that each and every element, or its equivalent, entered into respondents' machine. — Jones *v.* Munger, 49 Fed. 61; 1 C. C. A. 158.

Loom Co. *v.* Higgins, 105 U. S. 591; Gill *v.* Wells, 22 Wall. 1; Collar Co. *v.* Van Deusen, 23 Wall. 538; Fuller *v.* Yentzer, 94 U. S. 297.

The appellers' expert in effect testified, and we think with accuracy, that there had not previously existed any combination including each of the elements of either claim, and, accepting this statement, it follows that, if the construction of the appellees does embody those elements in the same com-

bination, it is an infringement. — McMichael *v.* Ruth, 128 Fed. 706; 63 C. C. A. 304.

National *v.* American, 53 Fed. 367.

Where it appears from the proceedings in the Patent Office and a consideration of the state of the art that a patent is not a pioneer patent, its claims must be limited in their scope to the actual combination of essential parts as shown, and cannot be construed to cover other combinations of elements, of different construction and arrangements. In such cases there should be identity of means and identity of operation combined with identity of result, in order to constitute infringement. — Greene *v.* Buckley. 135 Fed. 520; 68 C. C. A. 70.

Kokomo *v.* Kitselman, 189 U. S. 19.

Note: Taken alone and by itself, this statement is too broad. Between a pioneer patent and mere servile improvements there is a field of legitimate invention which requires the highest inventive genius and which is entitled to equivalency in proportion to the quality of invention disclosed.

§ 470. Combinations — Impairing Efficiency.

The tubular coupler of the appellant is employed strictly as a coupler and wholly fails to perform the unitary construction of the appellee, whatever other advantage the appellant may derive from its use. — Peerless *v.* White, 118 Fed. 827; 55 C. C. A. 502.

Sewall *v.* Jones, 91 U. S. 171.

Note: Clearly this is a dangerous pronouncement; and it will be noted that Judge Acheson vigorously dissents.

§ 471. Combinations — Improvements.

The plaintiff's patent being a patent for a combination of old devices, the question of the infringement depended upon whether or not the changes from that combination adopted in defendant's device, were merely changes in form, or such as arose from the substitution of equivalents. The defendant had the right to make improvements upon the plaintiff's combination, and defendant's patent cannot be held to be an infringement if it presents a new combination of the elements that are found in plaintiff's patent, or substitutes for one or more of the same a new ingredient, performing a new function. — Singer Mfg. Co. *v.* Brill, 54 Fed. 380; 4 C. C. A. 374.

§ 472. Combinations — Old Elements, New Functions.

Actual inventors of a combination of two or more ingredients, are entitled though the ingredients are old, if they produce a new and useful result, to restrain others from using the same. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

Pitts *v.* Whiteman, 2 Story, 619; Ames *v.* Howard, 1 Sumn. 487.

Valid letters patent undoubtedly may be granted for an invention which consists entirely in a new combination of old elements or ingredients, provided it appears that the new combination of the ingredients produces a new and useful result, but the rule is equally well settled that the invention in such a case consists merely in the new combination, and that a suit for infringement cannot be maintained against a party who constructs or uses a substantially different combination, even though it includes the exact same elements or ingredients, if the combination is, in fact, new and useful and substantially

different from the one which preceded it. — Fuller *v.* Yentzer, 94 U. S. 288; 24 L. Ed. 103.

Gill *v.* Wells, 22 Wall. 14.

Dissenting: Strong, Waite, Miller and Bradley.

If, however, one invents and secures a patent for a new combination of old mechanical elements which first performs a useful function, he is protected against all machines and combinations which perform the same function by equivalent mechanical devices to the same extent and in the same way as one who invents and patents a machine or composition of matter of like primary character. — Brammer *v.* Schroeder, 106 Fed. 918; 46 C. C. A. 41.

§ 473. Combinations — Omitting Element.

The patent is for a combination and consists in arranging the different portions and combining them in the manner stated in the specification for the purpose of producing a certain effect. None of the parts referred to are new, and none are claimed as new, nor is any portion of the combination less than the whole claimed as new, or stated to produce any given result. The end in view is proposed to be accomplished by the union of all, arranged and combined together in the manner described. The use of any two of these parts only, or of two combined with a third, which is substantially different, in form or in the manner of its arrangement or construction with others, is therefore not the thing patented. It is not the same combination if it substantially differs from it in any of its parts. — Prouty *v.* Ruggles, 16 Pet. 336; 10 L. Ed. 985.

The patent is for a combination. None of the parts are new or claimed as new. The use of any two of these parts only, or of two combined with a third, which is substantially different in form or in the manner of its arrangement and connection with the others, is therefore not the thing patented. It is not the same combination, if it substantially differs from it in any of its parts. — Stimpson *v.* Railroad, 10 How. 329; 13 L. Ed. 441.

Prouty *v.* Ruggles, 16 Pet. 341; Carver *v.* Hyde, 16 Pet. 513.

The rule is, that if a combination has, as here, three different known parts, and the result is proposed to be accomplished by the union of all three parts, arranged with reference to each other, the use of two of these parts only, combined with a third, which is substantially different in the manner of its arrangement and connection with the others, is not the same combination, and not infringement. — Brooks *v.* Fiske, 15 How. 212; 14 L. Ed. 665.

A claim for a combination of mechanical devices or parts, is not infringed by one who uses a part of the combination. — McCormick *v.* Talcott, 61 U. S. 402; 15 L. Ed. 930.

The omission of a material element of a combination avoids it. — Vance *v.* Campbell, 66 U. S. 427; 17 L. Ed. 168.

The law is well settled that there is no infringement of a patent which claims mechanical powers in combination, unless all of the parts have been substantially used. The use of the part less than the whole is no infringement. — Eames *v.* Godfrey, 68 U. S. 78; 17 L. Ed. 547.

Prouty *v.* Ruggles, 16 Pet. 341.

Where the defendant in constructing his machine omits entirely one of the ingredients of the plaintiff's combination without substituting any other, he

does not infringe, and if he substitutes another in the place of the one omitted, which is new or performs a substantially different function, or if it is old, but was not known at the date of plaintiff's invention as a proper substitute for the omitted ingredient, then he does not infringe. — Rees *v.* Gould, 82 U. S. 187; 21 L. Ed. 39.

Carver *v.* Hyde, 16 Pet. 514; Vance *v.* Campbell, 1 Black, 427; Roberts *v.* Herndon, 2 Cliff. 504; Mabie *v.* Haskell, 2 Cliff. 511; Brooks *v.* Fiske, 15 How 219; Stimpson *v.* R. R. 10 How. 329; Prouty *v.* Ruggles, 16 Pet. 341; Barrett *v.* Hall, 1 Mas. 477; Howe *v.* Abbott, 2 Story, 194.

It is undoubtedly the law, that if the subject of a patent is a combination of several processes, parts or devices, the use of any portion of the combination less than the whole cannot be infringement. There may indeed be a patent for a combination of many parts, and at the same time for an arrangement of some of the parts constituting another combination, but still a part of the larger. Yet if there be no patent for the constituents, they are open to the public for use in combination, provided all the elements of the patented combination be not employed. — Garratt *v.* Siebert, 131 U. S. cxxvi, app.; 21 L. Ed. 956.

It is substantially for a combination of the material parts of the entire machine, and no one can be said to infringe it who does not use the entire combination. — Brown *v.* Guild, 90 U. S. 181; 23 L. Ed. 161.

The rights of a patentee for a mere combination of old ingredients are not infringed unless it appears that the alleged infringer made, used or sold the entire combination. — Fuller *v.* Yentzer, 94 U. S. 288; 24 L. Ed. 103.

Gould *v.* Rees, 15 Wall. 194; Prouty *v.* Ruggles, 16 Pet. 341; Vance *v.* Campbell, 1 Black, 427.

Dissenting: Strong, Waite, Miller, Bradley.

Omission of an essential element avoids infringement. — Dunbar *v.* Meyers, 94 U. S. 187; 24 L. Ed. 34.

Gould *v.* Rees, 15 Wall. 194; Prouty *v.* Ruggles, 16 Pet. 341; Vance *v.* Campbell, 1 Black, 427; Gill *v.* Wells, 22 Wall. 28.

If more or less than the whole of his ingredients are used by another, such party is not liable as an infringer, because he has not used the invention or discovery patented. With the change of elements the identity of the product disappears. — Schumacher *v.* Cornell, 96 U. S. 549; 24 L. Ed. 676.

Vance *v.* Campbell, 1 Black, 427.

It is a well known doctrine of patent law, that the claim of a combination is not infringed if any of the material parts of the combination are omitted. It is equally well known that if any one of the parts is only formally omitted, and is supplied by a mechanical equivalent, performing the same office and producing the same result, the patent is infringed. — Union *v.* Desper, 101 U. S. 332; 25 L. Ed. 1024.

It is not the same combination if it differs from it in any of its parts. — McMurray *v.* Mallory, 111 U. S. 97; 28 L. Ed. 365; 4 S. Ct. 375.

Prouty *v.* Ruggles, 16 Pet. 336.

The omission of an essential element in a specific claim, without equivalency avoids infringement. — Blake *v.* San Francisco, 113 U. S. 679; 28 L. Ed. 1070; 5 S. Ct. 692.

It is clear that if the patent is to be construed as a combination, the appellant does not infringe, because he does not use one of the elements of the combination. — Voss *v.* Fisher, 113 U. S. 213; 28 L. Ed. 975; 5 S. Ct. 511.

Prouty *v.* Ruggles, 16 Pet. 336; Gould *v.* Rees, 15 Wall. 187; Rowell *v.* Lindsay, 113 U. S. 97.

The patent being for a combination, there can be no infringement unless the combination is infringed. — Rowell *v.* Lindsay, 113 U. S. 97; 28 L. Ed. 906; 3 S. Ct. 507.

Prouty *v.* Ruggles, 16 Pet. 336; Stimpson *v.* R. E. 10 How. 329; Eames *v.* Godfrey, 1 Wall. 78; Seymour *v.* Osborne, 11 Wall. 516; Dunbar *v.* Meyers, 94 U. S. 187; Fuller *v.* Yentzer, 94 U. S. 288.

The defendant does not use the same combination, and employs no device as an equivalent and substitute for the omitted element. It is not therefore liable as an infringer. — Yale *v.* Sargent, 117 U. S. 373; 29 L. Ed. 950; 6 S. Ct. 931.

Meter *v.* Desper, 101 U. S. 332; Gage *v.* Herring, 107 U. S. 640.

When the device of the patent in suit shows duplicate parts, viz. a double time movement to control the lever which controls the dog, and the infringing device uses the single combination, such omission does not avoid infringement. — Yale *v.* Berkshire, 135 U. S. 342; 34 L. Ed. 168; 10 S. Ct. 884.

In conformity with the ruling of the Supreme Court in the case of Corn Planter Patent, 23 Wall. 181, it was right, we think, to construe the claims of the patent in question as embracing the devices shown in the specifications, each claim being regarded as including such devices and combination as a necessary element to meet the requirements of the general terms in which it is expressed. When the claims are so construed, it may be said of each of them, in the language of that case: "The claim thus limited is considerably narrowed in its operation. It is substantially for a combination of the material parts of the entire machine, and no one can be said to infringe it who does not use the entire combination." This, of course, does not exclude the doctrine of equivalents. — Illinois *v.* Robbins, 52 Fed. 215; 3 C. C. A. 42.

It is well settled that the omission in the alleged infringing device, of an element named in a combination claim of a patent said to be infringed is a complete defense to the charge of infringement. — Brown *v.* Stilwell, 57 Fed. 731; 6 C. C. A. 528.

Rowell *v.* Lindsay, 113 U. S. 97.

It is well settled that, in order to constitute the infringement of a combination, it must appear that the alleged infringing device included every element of the combination as claimed. It is immaterial that the elements claimed in the patent of plaintiff and omitted in the defendant's device are not of the essence of the real invention. — Kinzel *v.* Luttrell, 67 Fed. 926; 15 C. C. A. 82.

Electric *v.* Hall, 114 U. S. 87; Voss *v.* Fisher, 113 U. S. 213; Gage *v.* Herring, 107 U. S. 640; Water *v.* Desper, 101 U. S. 332; Dunbar *v.* Meyers, 94 U. S. 187; Reedy *v.* Scott, 23 Wall. 352.

But the appellant is met here by the unquestioned rule that the absence from a device or construction, that is alleged to infringe, of a single essential element of a patentable combination of old elements, is fatal to the claim of infringement. — Murphy *v.* Excelsior, 76 Fed. 965; 22 C. C. A. 658.

Building Co. *v.* Eustis, 65 Fed. 804; Hailes *v.* VanWormer, 20 Wall. 353; Bragg *v.* Fitch, 121 U. S. 478.

The absence, from a device that is alleged to infringe a patented combination of old elements, of a single essential element of that combination, is fatal to the claim of infringement. — Adams Elec. Ry. *v.* Lindell, 77 Fed. 432; 23 C. C. A. 223.

Hailes *v.* VanWormer, 20 Wall. 353; Bragg *v.* Fitch, 121 U. S. 478; Building Co. *v.* Eustis, 65 Fed. 804; Murphy *v.* Excelsior, 70 Fed. 491.

"There is no infringement of a patent which claims mechanical powers in combination, unless all the parts have been substantially used." Eames *v.* Godfrey, 1 Wall. 78. A combination of the mechanical parts of an entire machine is not infringement, except by the use of the entire combination. Brown *v.* Guild, 23 Wall. 181. — Carter *v.* Hanes, 78 Fed. 346; 24 C. C. A. 128.

The defendant ought not to escape because it does not use subordinate or unimportant elements of the combinations described in other claims, which were undoubtedly omitted from this claim that the inventor might more perfectly secure the essential elements of his invention. — Mast *v.* Dempster, 82 Fed. 327; 27 C. C. A. 191.

Mfg. Co. *v.* Wharton, 28 Fed. 189; Tondeur *v.* Stewart, 28 Fed. 561; Coupler *v.* Pratt, 70 Fed. 622.

While it is true that the machine used by the appellant brings together several of the old devices which formed part of the Streat combination, still it is also true that it omits other important parts thereof, and consequently there is no infringement. — American *v.* Streat, 83 Fed. 700; 28 C. C. A. 18.

Schumacher *v.* Cornell, 96 U. S. 549; Palmer *v.* Corning, 156 U. S. 342.

The combination is not infringed unless all of the elements of the combination are found in the infringing device. — St. Louis *v.* National, 87 Fed. 885; 31 C. C. A. 265.

The new Jensen machine manifestly does not infringe, as it does not contain all the elements of the combination patent of Norton, or their mechanical equivalents. — Norton *v.* Jensen, 90 Fed. 415; 33 C. C. A. 141.

Prouty *v.* Ruggles, 16 Pet. 337; Stimpson *v.* Railroad, 10 How. 329; Eames *v.* Godfrey, 1 Wall. 78; Seymour *v.* Osborne, 11 Wall. 516; Dunbar *v.* Meyers, 94 U. S. 187: Fuller *v.* Yentzer, 94 U. S. 298; Merrill *v.* Yeomans, 94 Fed. 568; Meter Co. *v.* Desper, 101 U. S. 332; Miller *v.* Brass Co. 104 U. S. 350; Rowell *v.* Lindsay, 113 U. S. 97.

Plaintiff's patent being for a combination, it necessarily follows that there cannot be any infringement unless the defendant's elevator contains all of the elements of the combination in plaintiff's patent, or their mechanical equivalent. — Overweight *v.* Improved, 94 Fed. 155; 36 C. C. A. 125.

Norton *v.* Jensen, 90 Fed. 415; DeLoriea *v.* Whitney, 63 Fed. 611.

The absence from a device that is alleged to infringe a patented combination of a single element of that combination is fatal to the claim of infringement. — National *v.* Interchangeable, 106 Fed. 693; 45 C. C. A. 544.

Adams *v.* Lindell, 77 Fed. 432.

Nothing in the law of patents is better settled than the rule that a claim for a combination is not infringed if any one of the described and specified elements is omitted, without the substitution of anything equivalent thereto. — Pittsburg *v.* Pittsburg, 109 Fed. 644; 48 C. C. A. 580.

Water-Meter *v.* Desper, 101 U. S. 332; Weatherhead *v.* Coupe, 147 U. S. 322; Wright *v.* Yuengling, 155 U. S. 47.

It is well settled that there is no infringement if any one of the material parts of the combination is omitted, and that a patentee will not be heard to deny the materiality of any element included in his combination claim. — Adam *v.* Folger, 120 Fed. 260; 56 C. C. A. 540.

Vance *v.* Campbell, 1 Black, 427; Meter *v.* Desper, 101 U. S. 337; McClain *v.* Ortmayer, 141 U. S. 423.

The nonuse of any specific element of a combination claim or its equivalent avoids infringement. — American *v.* Cimiotti, 123 Fed. 869; 59 C. C. A. 357.

Water-Meter *v.* Desper, 101 U. S. 332; Weatherhead *v.* Coupe, 147 U. S. 322; Wright *v.* Yuengling, 155 U. S. 47.

While the parts of the last are separable, the invention is unitary, and incapable of being divided into patentable parts; and therefore the use of the heel part or of the fore part cannot be said to be a use of a part of the Clark invention within the reasonable meaning of the license. — Wright *v.* Fitz, 133 Fed. 394; 66 C. C. A. 456.

As one element of appellees' combination has thus been replaced by a device that is materially different, the appellant's lantern does not infringe. — Keystone *v.* Spear, 136 Fed. 595; 69 C. C. A. 369.

Since at least one element of each of the combinations secured by the claims is wanting, they cannot be held to infringe. The absence from a device that is alleged to infringe a patented combination of a single mechanical element of that combination is fatal to the claim of infringement. — Mallon *v.* Gregg, 137 Fed. 68; 69 C. C. A. 48.

Adams *v.* Lindell, 77 Fed. 432; National *v.* Interchangeable, 106 Fed. 693.

The combination is an entirety. If one of its elements is omitted, it ceases to exist. It is well settled, therefore, that the omission of any one ingredient of the combination covered by the claim averts any charge of infringement. — Central *v.* Coughlin, 141 Fed. 91; 72 C. C. A. 93.

Prouty *v.* Draper, 16 Pet. 336; Black Diamond *v.* Excelsior, 156 U. S. 611.

The absence from a combination that is alleged to infringe of a single essential element is fatal to the claim for infringement. — Brammer *v.* Witte, 159 U. S. 726; 86 C. C. A. 207.

Cimiotti *v.* American, 198 U. S. 399; Adams *v.* Lindell, 77 Fed. 432; National *v.* Interchangeable, 106 Fed. 693.

§ 474. Contributory — Furnishing Material.

That the complainants were entirely within the boundary of their patent rights in permitting the use of their invention only in connection with wire sold by themselves is not an open question in this court. — Rupp *v.* Elliott, 131 Fed. 730; 65 C. C. A. 544.

Heaton-Peninsular *v.* Eureka, 77 Fed. 288; Bement *v.* National, 186 U. S. 70; Cortelyou *v.* Lowe, 111 Fed. 1005; Victor *v.* The Fair, 123 Fed. 424; Tubular *v.* O'Brien. 93 Fed. 200; Edison *v.* Pike, 116 Fed. 863.

It is, therefore, the use of such powder which constitutes infringement and when a manufacturer of acid phosphates sells a manufacturer of baking powder a barrel of granular acid phosphate the presumption is not unfair that he expects it to be used for baking powder. — Rumford *v.* Hygienic, 159 Fed. 436; 86 C. C. A. 416.

§ 475. Contributory — Intent.

The intention to assist in infringement must be shown affirmatively and cannot be inferred from the mere fact that the articles are in fact used in the patented combinations or may be so used. But where the article can only be used in the patented combination, the inference and intent of the maker and seller is certain, and the right of the patentee to injunction ought, we think, to be equally certain. — Thomson-Houston *v.* Ohio, 80 Fed. 712; 26 C. C. A. 107.

Thomson-Houston *v.* Kelsey, 75 Fed. 1005.

Of course, if it made or sold scales having peculiar provision for the intended incorporation therein of a valid patented device of the appellee, it would be liable as a contributor, if the expected incorporation should thereafter be made by another. But if it makes and sells scales having simply adaptations for a proper adjustment, such as was known in the art, it would not be liable if another person should of his own volition put into the scales a form of adjustment patented by the appellee. — Standard *v.* Computing, 126 Fed. 639; 61 C. C. A. 541.

§ 476. Contributory — Making Elements.

What contributory infringement is, and why it should be enjoined, was clearly shown in Wallace *v.* Holmes, 9 Blatchf. 65, the earliest case in this country upon the subject, and upon which the subsequent cases of contributory infringement rest. The willingness of the defendant in this case to aid other persons in any attempts which they may be disposed to make towards infringement is also apparent. It sufficiently appears from the defendant's advertisements and affidavits that it was ready to sell to any and all purchasers, irrespective of their character as infringers. A proposed concert of action with infringers, if they present themselves, is fairly to be inferred from the obvious facts of the case; and an injunction order is the proper remedy against wrongful acts which are proposed, or are justly to be anticipated. — Thomson-Houston *v.* Kelsey, 75 Fed. 1005; 22 C. C. A. 1.

We would not be understood as deciding that the defendant company has the right to manufacture the knuckles which form a part of the complainant's device, and to sell them indiscriminately to all persons who see fit to buy them; for, clearly, such is not the law. We have no doubt that the defendant would be liable as an infringer if it so happened that the knuckles by it made and sold should be used by the purchasers in the construction of complete couplers such as are described in the complainant's patents. Wallace *v.* Holmes, Fed. Cas. No. 17,100. Therefore, if the defendant continues to manufacture the coupling head or knuckles, and keeps them in stock, it must see to it that they are sold, for the purpose of repairing the patent coupling device, to persons or corporations who have acquired the right to make and use them for that purpose. — Shickle *v.* St. Louis, 77 Fed. 739; 23 C. C. A. 433.

The principle governing infringement of combination patents by furnishing a necessary element in the combination is applicable to the case at bar. To make or sell a single element may be quite an innocent act, for a combination is not infringed except by uniting all of the necessary elements. But "to make or sell a single element with the intent that it shall be united to the other elements, and so complete the combination is infringement." Rob. Pat. sec. 924, and cases cited. Judge Shepley stated the rule quite clearly in Saxe *v.* Hammond, Fed. Cas. No. 12,411, when he said:

"Different parties may all infringe by respectively making or selling, each of them, one of the elements of a patented combination, provided these

separate elements are made for the purpose and with the intent of their being combined by a party having no right to combine them. But the mere manufacture of a separate element of a patented combination, unless such manufacture be proved to have been conducted for the purpose and with the intent of aiding infringement, is not in and of itself infringement." — Heaton *v.* Eureka, 77 Fed. 288; 25 C. C. A. 267.

Wallace *v.* Holmes, 9 Blatchf. 65; Holly *v.* Machine Co. 18 Blatchf. 327, 4 Fed. 74; Traverse *v.* Beyer, 26 Fed. 450; Willis *v.* McCullen, 29 Fed. 641; Alabastine *v.* Payne, 27 Fed. 559; Celluloid *v.* American, 30 Fed. 437; Boyd *v.* Cherry, 50 Fed. 279; Supply Co. *v.* McCready, 4 B. & A. 588; Morgan *v.* Albany, 152 U. S. 425; Wilson *v.* Simpson, 9 How. 109.

It is well settled that where one makes and sells one element of a combination covered by a patent with the intention and for the purpose of bringing about its use in such a combination, he is guilty of contributory infringement and is equally liable to the patentee with him who in fact organizes the complete combination. — Thomson-Houston *v.* Ohio, 80 Fed. 712; 26 C. C. A. 107.

Wallace *v.* Holmes, Fed. Cas. 79; Tie Co. *v.* Simmons, 106 U. S. 89; Heaton *v.* Eureka, 77 Fed. 288; Bowker *v.* Daws, 3 Fed. Cas. 1070; Richardson *v.* Noyes, 20 Fed. Cas. 723; Traverse *v.* Beyer, 26 Fed. 450; Willis *v.* McCullen, 29 Fed. 641; Alabastine *v.* Payne, 27 Fed. 559; Celluloid *v.* American, 30 Fed. 437; Morgan *v.* Albany, 152 U. S. 425.

They make and sell pumps in all the essential respects like that of the patent. They do not, indeed, make the lower cylinder but they manufacture pumps to be used in tubular wells, the tube and valve placed therein supplying the lower cylinder and valve of the patent. Their pumps are inoperative and useless unless so constructed, the case presented is therefore one of contributory infringement. — Red Jacket *v.* Davis, 82 Fed. 432; 27 C. C. A. 204.

Wallace *v.* Holmes Fed. Cas. 17,100; Renwick *v.* Pond, Fed. Case, 11,702.

It would seem clear enough that the judge who granted this injunction made no mistake in holding that the making and selling these filters, adapted to and intended as they were, for no other use than filtering beer or similar fluids, should be held as contributing to such use by brewers, and as standing on the same liability as the parties actually using them. — Loew *v.* German American, 107 Fed. 949; 47 C. C. A. 94.

Heaton-Peninsular *v.* Eureka, 77 Fed. 285; Edison *v.* Peninsular, 101 Fed. 831; Thomson-Houston *v.* Kelsey, 75 Fed. 1005.

If the defendant constructed and sold an essential part of the infringing structure for the purpose of enabling another person to infringe the patent by adding something else to make the entire infringing article, it made itself a contributory infringer to, and liable for, the infringement. And we have no doubt that this was the fact. The casings without bottoms which the defendant made and sold were good for nothing else. Their form and characteristics plainly indicated their purpose. The case is not like one where the thing made is also adapted to use in other ways. It would be wholly inadmissible to shut out the manufacture or sale of things adapted to a proper and lawful use. That would interfere with the rights and privileges of the public. But it has been held that, even in that case if it were proven that the thing, although adapted to other uses, was nevertheless intended by the seller to go into, and contribute to, the infringement by another, the furnisher could not escape the consequences of the infringement. — Canda *v.* Michigan, 124 Fed. 486; 61 C. C. A. 194.

Heaton *v.* Eureka, 77 Fed. 288; Edison *v.* Peninsular, 95 Fed. 669.

He who makes and sells one or more elements of a patented combination, with the intention and for the purpose of bringing about its or their use in an infringing combination, is guilty of contributory infringement, and is equally liable with him who in fact organizes and uses the complete combination. — Heekin *v.* Baker, 138 Fed. 63; 70 C. C. A. 559.

Wallace *v.* Holmes, Fed. Cas. 17,100; Heaton *v.* Eureka, 77 Fed. 288; Thomson-Houston *v.* Ohio, 80 Fed. 712; Red Jacket *v.* Davis, 82 Fed. 432; Loew *v.* German, 107 Fed. 949.

They have infringed the process of Johnson because they supplied the apparatus adapted to employ Johnson's process with intent that the plant should be or would be operated with that process. It was therefore guilty of contributing to the infringement. — Johnson *v.* Foos, 141 Fed. 72; 72 C. C. A. 105.

Heaton *v.* Eureka, 77 Fed. 288; Thomson-Houston *v.* Ohio, 80 Fed. 712.

The arrangement of the different parts was therefore of the essence of the invention, and the Foos Company had a legal right to continue to make and sell attrition mills and other parts of the mechanism which were old, provided only that they did so with no purpose to contribute to the plans of one intending an infringement by combining the parts. — Johnson *v.* Foos, 141 Fed. 73; 72 C. C. A. 105.

Heaton *v.* Eureka, 77 Fed. 288; Thomson-Houston *v.* Ohio, 80 Fed. 712; German *v.* Loew, 103 Fed. 303; Loew *v.* German, 107 Fed. 949.

On ample evidence, the court below found that most of the sales of Leeds & Catlin records were knowingly made by the plaintiff in error to enable the owners of Victor Talking Machines to reproduce such musical pieces as they wished by the combination of Leeds & Catlin records with said machines. Upon these facts it is clear that the Leeds & Catlin Company have made and sold a single element of the claims of the Berliner patent with the intent that it should be united to the other element and complete the combination; and this is infringement. — Leeds *v.* Victor, 154 Fed. 58; 83 C. C. A. 170.

Heaton *v.* Eureka, 77 Fed. 297; Cortelyou *v.* Lowe, 111 Fed. 1005.

Plaintiff in error seeks to avoid that result by asserting that the records under consideration are but temporary, perishable, and unpatented parts of the patented combination, and therefore under Morgan *v.* Albany, 152 U. S. 425, free to be manufactured and sold by anyone. This contention is not supported by the evidence. Disk records are fragile (i. e. brittle and easily broken) but they are not perishable, (i. e. subject to decay by their inherent qualities, or consumed by a few uses or a single one). Neither are they temporary, i. e., not intended to endure; on the contrary we find them capable of remaining useful for an indefinite period. — Leeds *v.* Victor, 154 Fed. 58; 83 C. C. A. 170.

The doctrine of contributory infringement has never been applied to a case where the thing contributed is one of general use, or suitable to a variety of other uses, especially where there is no definite purpose that the thing sold shall be employed with others to infringe a patent right. Rumford *v.* Hygienic, 148 Fed. 866. But this plaintiff in error is shown to have manufactured and sold records for the express purpose of supplying users of Victor machines; nor are such records staple articles of commerce. Cortelyou *v.* Johnson, 145 Fed. 935. — Leeds *v.* Victor, 154 Fed. 58; 83 C. C. A. 170.

§ 477. Contributory — Rules.

General rule by Taft, J.

It being established that defendant is offering for sale articles, intending them to be used in combinations which, if unlicensed by complainant, would be infringements of complainant's patents, we think that it is the duty of the defendant to see to it that such combinations which it is intentionally inducing and promoting shall be confined to those which may be lawfully organized. We are unable to see why any different rule should be applied in such a case from that applicable to a case in which a defendant makes a patented machine to order. He may make such a machine upon the order of the patentee or a licensee, but not otherwise. Upon him is the peril of a mistake as to the lawful authority of him who gives the order. So, he may knowingly assist in assembling, repairing, and renewing a patented combination by furnishing some of the needed parts; but, when he does so, he must ascertain, if he would escape liability for infringement, that the one buying and using them for this purpose has a license, express or implied, to do so. What we have said has application only to cases in which it affirmatively appears that the alleged infringer is offering the parts with the purpose that they shall be used in the patented combination. — Thomson-Houston *v.* Ohio, 80 Fed. 712; 26 C. C. A. 107.

Underlying principles stated by Judge Taft.

From the earliest times, all who take part in a trespass, either by actual participation therein or by aiding and abetting it, have been held to be jointly and severally liable for the injury inflicted. There must be some concert of action between him who does the injury and him who is charged with aiding and abetting, before the latter can be held liable. When that is present, however, the joint liability of both the principal and the accomplice has been invariably enforced. If this healthful rule is not to apply to trespass upon patent property, then, indeed, the protection which is promised by the constitution and laws of the United States to inventors is a poor sham. Many of the most valuable patents are combinations of non-patentable elements, and the only effective mode of preventing infringement is by suits against those who, by furnishing the parts which distinguish the combination, make it possible for others to assemble and use the combination, and who, by advertisement of the sale of such parts and otherwise, intentionally solicit and promote such invasions of the patentee's rights. — Thomson-Houston *v.* Ohio, 80 Fed. 712; 26 C. C. A. 107.

Morgan *v.* Envelope Co. 152 U. S. 425 explained and distinguished (Taft).

The Morgan-Envelope Co. case, so far from departing from the doctrine of contributory infringement, expressly recognizes it and the authorities in which it is announced and enforced. The court held, however, that the doctrine of contributory infringement could not apply in a case in which the claim of the patent embraces a machine and something to be treated thereby, which is perishable in its nature, and the alleged infringer furnishes the latter element to be used with the machine and consumed. Whether this holding is really a limitation upon the doctrine of contributory infringement, or is to be regarded only as in effect deciding that such combinations are impossible in a patent, may admit of question. — Thomson-Houston *v.* Ohio, 80 Fed. 712; 26 C. C. A. 107.

Heaton *v.* Eureka, 77 Fed. 288.

It does appear that defendant is offering for sale articles that can be used only in combinations covered by complainant's claims. This is an effort to secure a concert of action by which the combinations of complainant's

patents may be assembled. If successful, infringement will follow; hence the preliminary steps which are intentionally taken to bring about the injury may be enjoined. — Thomson-Houston *v.* Ohio, 80 Fed. 712; 26 C. C. A. 107.

Wallace *v.* Holmes, 29 Fed. Cas. 79.

Infringement is the unlawful making or selling or using of a patented invention. Contributory infringement is " the intentional aiding of one person by another in the unlawful making or selling or using of the patented invention; " and this is usually done by making or selling a part of the patented invention with the intent and purpose of so aiding. The essence of contributory infringement lies in concerting or planning with others in an unlawful invasion of the patentee's rights. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

Howson, Contrib. Inf. Pat. 1; Thomson-Houston *v.* Kelsey, 72 Fed. 1016; Thomson-Houston *v.* Ohio, 78 Fed. 139; Wallace *v.* Holmes, 9 Blatchf. 65; Renwick *v.* Pond, 10 Blatchf. 39; Saxe *v.* Hammond, 1 B. & A. 629; Richardson *v.* Noyes, 2 B. & A. 398; Schneider *v.* Pountney, 21 Fed. 399; Traverse *v.* Beyer, 26 Fed. 450; Snyder *v.* Bunnell, 29 Fed. 47; Celluloid *v.* American, 30 Fed. 437; Singer *v.* Springfield, 34 Fed. 393; Schneider *v.* Missouri, 36 Fed. 582; Heaton *v.* Eureka, 77 Fed. 288.

The intent and purpose that the element made and sold shall be used in a way that shall infringe the combination in which it is an element constitutes the necessary concert of action between him who furnished the single part and he who actually does the injury by the assembling and using of all the parts in such a way as to be an infringement. This principle runs through all the cases upon contributory infringement. — Bullock *v.* Westinghouse, 129 Fed. 105; 63 C. C. A. 607.

Heaton *v.* Eureka, 77 Fed. 288; Saxe *v.* Hammond, Fed. Cas. 12,411; Wallace *v.* Holmes, 9 Blatchf. 65; Thomson-Houston *v.* Kelsey, 75 Fed. 1005; German-American *v.* Loew, 103 Fed. 303, affd. 107 Fed. 949; Snyder *v.* Bunnell, 29 Fed. 47; Thomson-Houston *v.* Ohio, 80 Fed. 712.

It is the sale of material adapted to the infringing use, with the intent and purpose that it shall be so used, which constitutes contributory infringement. It is the intent and purpose to aid and assist in bringing about an infringement which is the essence of the tort. — Rupp *v.* Elliott, 131 Fed. 730; 65 C. C. A. 544.

Loew *v.* German-American, 107 Fed. 949; Thomson-Houston *v.* Ohio, 80 Fed. 712.

The majority of the court (Coxe and Townsend JJ.) is of the opinion that the decree at bar pushes the doctrine of contributory infringement to its extreme limits. The doctrine originated in a desire to secure to a patentee complete protection in all the rights granted to him by the patent, but it was confined to those rights; it went no farther. One who sold an element of a patented combination, which could not be used except in an infringing combination or device, was not permitted to reap the benefits of such sale. He did not directly infringe, but he promoted the infringement of others by putting in their hands a device which could only be used in violation of the patent. When confined to articles, whether covered by the patent or not, which are made for the express purpose of inducing infringement and are not intended for any legitimate use, the doctrine of contributory infringement is logical, just and salutary. But we doubt the wisdom of extending it to the ordinary commodities of life, used in connection with a patented machine, because the patentee sells or licenses the machine upon the condition that he alone is to furnish these commodities. Care should be taken

that the courts, in their effort to protect the rights of patentees, do not invade the just rights of others, engaged in legitimate occupations, by creating new monopolies not covered by patents and by placing unwarrantable restrictions upon trade. We incline to the opinion that the line should be drawn to include those articles which are either parts of a patented combination or device or which are produced for the sole purpose of being so used and to exclude the staple articles of commerce. — Cortelyou *v.* Johnson, 145 Fed. 933; 76 C. C. A. 455.

The true inquiry is whether the owner of a patented combination, the elements of which are durable, unbroken, and in good repair, may buy from the patentee one specimen of a single element, from an outsider an indefinite number of identical specimens of the same element, and keep and use them all, under cover of the word "substitution;" it further appearing that the element so procured and used is useful and commercially known only in respect of said combination. — Leeds *v.* Victor, 154 Fed. 58; 83 C. C. A. 170.

Thomson-Houston *v.* Kelsey, 75 Fed. 58; Chaffee *v.* Belting Co. 22 How. 223.

§ 478. Contributory — Miscellaneous Rules.

When it is or is not infringement to supply or to use fully discussed with cases. — Morgan *v.* Albany, 152 U. S. 425; 38 L. Ed. 500; 14 S. Ct. 627.

That a manufacturer who sold ink to be used in a patented device, the device being sold with restrictions that it be used only with ink made by the owner of the patent and notice of such restriction being printed on the bottom of such device; that such ink manufacturer having no other notice than that communicated to a selling agent who took the ink order and who did not communicate such notice to his principals; and that filling such order, and not entering into the manufacture and sale of ink to be so used with the patented device, is not contributory infringement, see Cortelyou *v.* Johnson, 207 U. S. 196; 52 L. Ed. 167; 28 S. Ct. 105.

The decree dismissing the bill against the Lowell Light & Power Company was clearly right. It sold the current which it generated to the Peninsular Company. That current was as well adapted for use in one mode of distribution as in another and was adapted equally well for furnishing power as for illuminating purposes. — Edison *v.* Peninsular, 101 Fed. 831; 43 C. C. A. 479.

That one who designs and constructs an infringing machine for others, under contract and pay for his services, is a contributory infringer, see Trent *v.* Risdon, 102 Fed. 635; 42 C. C. A. 529.

That where a sale constituting contributory infringement is solicited by the complainant, said complainant is not in a position to charge defendant with injury, see Cortelyou *v.* Johnson, 145 Fed. 933; 76 C. C. A. 455.

But the purchaser of the No. 78 machine acquired no right to infringe the patentee's right to manufacture said combination known as No. 79. When these defendants therefore, supplied said attachment and added it to said No. 78 machine, and therefore converted it into a No. 79 machine by uniting it to the patented attachment which made up the complete combination of No. 79, they infringed said right of manufacture of the patented combination, with which complainant had not parted by the sale of a No. 78 machine.

The well settled rule is that the purchase of a patented article from the patentee acquires the absolute right to the unrestricted use of said article; that by the sale it passes beyond the limit of the monopoly. But it would

be perversion of this rule to say that such a purchaser may use a portion of said article for the purpose of enabling the owner of a machine sold by the patentee, without said portion to construct a patented combination which he is not licensed to manufacture or use. — National *v.* Grobet, 153 Fed. 905; 82 C. C. A. 651.

The evidence warrants the finding that in at least one instance defendants sold rolls to be used in one of complainant's Pianolas after it had been informed by the purchaser that his instrument contained the notice (prohibiting such purchase) . . . injunction was properly issued. — Æolian Co. *v.* Juelg Co. 155 Fed. 119; 86 C. C. A. 205.

§ 479. Corporations — Common Carriers.

When one engages in such public business it is of no consequence whether the means or instruments whereby it is conducted are patented or not. It is the *business* that is regulated. A patent secures title to the thing patented and its use, just as the law secures title to other description of property. The owner need not apply his property of either description to such public employment, but if he does, the employment itself will be subject to the rules which the law has prescribed for its government, without respect to the means or instrument by which it is conducted. — Delaware & A. Tel. *v.* Delaware, 50 Fed. 677; 2 C. C. A. 1.

Defendant was sued as infringer and set up its duty as a common carrier and disclosed the ownership of the alleged infringing cars. On petition by the owners, they were allowed to intervene and defend. — Standard Oil Co. *v.* Southern, 54 Fed. 521; 4 C. C. A. 491.

§ 480. Corporations — Joint Stock.

It does not appear that the statutes of New York require that the president and treasurer of a joint-stock association should be a shareholder therein, and there is no proof in the record that defendant is, or ever was, a shareholder or associate in such association. *Held:* that suit could not be maintained against such officer for infringement on authority of Tyler *v.* Galloway, 13 Fed. 477. — National *v.* Stolts, 135 Fed. 534; 68 C. C. A. 84.

§ 481. Corporations — Officers of.

It is well settled that a mere workman or servant who makes, uses or vends for another, and under his immediate supervision, a patented article, is not liable in an action at law for damages. This rule is an apparent exception to the general principle of law which makes all who participate in a tort of misfeasance principals, and liable for damages therefor; and we do not think it should be so extended as to exempt from liability the general manager of a business which infringes upon the exclusive right of a patentee. — Graham *v.* Earl, 92 Fed. 155; 34 C. C. A. 267.

Creamer *v.* Fry, 68 Fed. 201; Lightner *v.* Brooks, Fed. Cas. 8,344.

It is sufficient to say that a director's liability to an injunction does not conclusively establish his liability in an action at law for damages, and, conversely, that his liability in an action at law does not conclusively establish that he may properly be enjoined or ordered to account for profits. We are of opinion, that by the general principles of law, and by analogy with other courts, a director of a corporation, who, as director, by vote or otherwise, specifically commands the subordinate agents of the corporation to engage in the manufacture and sale of an infringing article, is liable individually in action at law for damages brought by the owner of the patent so

infringed. As with other infringers, it is immaterial whether the director knew or was ignorant that the article manufactured and sold, did infringe a patent. We think that the request was sufficiently explicit to require the judge to charge the jury that a defendant who directed the infringing machines should be manufactured and put upon the market, and that their sale should be pushed, was not relieved from liability by reason of the fact that he was acting as a director of a corporation, or in its behalf. — National *v.* Leland, 94 Fed. 502; 37 C. C. A. 372.

Mitchell *v.* Harmony, 13 How. 115; Pol. Tort. 5 ed. 190; Weir *v.* Bell, 3 Exch. Div. 238; Brown *v.* Lent, 20 Vt. 529; Wilson *v.* Peto, 6 Moore 47; Power Co. *v.* Allen, 120 Mass. 252; Peck *v.* Cooper, 112 Ill. 192; Weir *v.* Barnett, 3 Exch. Div. 32; Amy *v.* Supervisors, 11 Wall. 136; Ferguson *v.* Earl, 9 Clark. & F. 251; Belknap *v.* Schild, 161 U. S. 10; National *v.* Boston, 156 U. S. 502; (reversing) Nickel *v.* Worthington, 13 Fed. 392.

Note: On the question of liability of the directors and officers of a corporation, Brown, D. J., dissents. This rule of the first circuit is contrary to the rule well established in the second circuit, and also in a number of the other circuits. It is doubtful whether an officer of a corporation per se is personally liable unless the conduct of such corporation or such officer is such as to constitute an open, personal and flagrant invasion of an established and known right.

We have no doubt, if there is infringement, that Lamb (an officer of the defendant, the inventor and assignor of the patent in suit, and formerly with complainant) should be held to be a contributor to it. — Lamb *v.* Lamb, 120 Fed. 267; 56 C. C A. 247.

With respect to the matter of infringement, the defendants North and Steele are not shown to have been individually guilty of any infringing act. There is therefore no excuse for joining them as parties, unless it be that they were offending officers of the corporation, and this is no excuse. It may be, however, that the complainant mistakenly supposed the officers were active participants in the infringement, and has been disappointed in the proofs. However this may be, the bill was properly dismissed as to them, and so far the decree of the circuit court will be affirmed, with costs of both courts to those defendants. — Western *v.* North, 135 Fed. 79; 67 C. C. A. 553.

The appellee company, a corporation, can act only through its officers and agents. We find nothing in the record to show that the appellee Deknatel acted beyond the ordinary scope of his office. No cause of action against him is made out. — Cazier *v.* Mackie-Lovejoy, 138 Fed. 654; 71 C. C. A. 104.

Inasmuch as it does not appear that the defendant Kerman has any connection with the infringement, except as an officer of said corporation, the bill should be dismissed as to him with costs. — Scott *v.* Fisher, 145 Fed. 915; 76 C. C. A. 447.

Hutter *v.* De Q. Bottle, 128 Fed. 283.

That officers of a corporation are not personally liable as tort feasors in damages and profits when the corporation received the benefit of their acts, wholly regardless of the inequitable conduct of such officers, see McSherry *v.* Dowagiac, 160 Fed. 948; 89 C. C. A. 26.

The bill prays, as usual, an injunction and account against both the American Loom Co. and the officer referred to. The circuit court dismissed the bill, and the complainant has appealed to us. So far as the officer of the re-

spondent corporation is concerned, the case is not brought within the rule of National *v.* Leland, 94 Fed. 502. Therefore, as to him, the final decree will provide that the bill be dismissed; and, as he has been brought in as one against whom substantial relief is asked, he will recover his costs in the circuit court. — Draper *v.* American, 161 Fed. 728; 88 C. C. A. 588.

§ 482. Corporations — Miscellaneous Holdings.

As a corporation cannot absolve itself from liability without the consent of the legislature, its liability is fixed by the acts of persons using the corporate name with the assent of the corporate authorities. — Railroad *v.* Winans, 58 U. S. 31; 15 L. Ed. 27.

Beman *v.* Rufford, 1 Simon N. S. 550; Winch *v* Ry. 13 L. & E. 506.

§ 483. Defenses — Anticipation.

For further treatment of this subject the titles *Abandonment, Anticipation, Defenses* and *Invention* should be examined. It is not possible, without undue repetition, to assemble all of the rulings under this title.

Letters patent, though not set up in the answer, may be received in evidence to show the state of the art and to aid in the construction of the plaintiff's claim, though not to invalidate the claim on the ground of want of novelty when properly construed. — Grier *v.* Wilt, 120 U. S. 412; 30 L. Ed. 712; 7 S. Ct. 718.

Vance *v.* Campbell, 66 U. S. 427; Railroad *v.* Dubois, 79 U. S. 47; Brown *v.* Piper, 91 U. S. 37; Eachus *v.* Broomall, 115 U. S. 429.

Where defendant obtained his idea from the patent in suit he is none the less entitled to claim anticipation by setting up a prior patent, especially when such prior device appears to show full anticipation of his own. — Hoff *v.* Iron Clad, 139 U. S. 326; 35 L. Ed. 179; 11 S. Ct. 580.

Defendant may show that the invention claimed was patented or described in some printed publication (not before the American Patent was granted — nor before the application for it was filed) but before the patentee's supposed invention or discovery thereof. — Clark *v.* Willimantic, 140 U. S. 481; 35 L. Ed. 521; 11 S. Ct. 846.

U. S. R. S. 4920.

§ 484. Defenses — Miscellaneous.

It is not easy to perceive why the defendant who uses a patented machine should not have the benefit of a like presumption in his favor, arising from a like investigation of the originality of his invention, and the judgement of the public officers, that his machine is new and not an infringement of the patent previously granted to the plaintiff. It shows at least that the defendant has acted in good faith, and is not a wanton infringer. — Corning *v.* Burden, 15 How. 252; 14 L. Ed. 683.

Reversed in Blanchard *v.* Putnam, 8 Wall. 420; Reaffirmed in Ransome *v.* Hyatt, 69 Fed. 148.

We are not at all satisfied that, in equity, the defendant can be permitted to set up the defense of non-infringement; while it makes no attempt by cross bill or even in the answer to show that the agreements were obtained by fraud, surprise or imposition. — Eureka *v.* Bailey, 78 U. S. 488; 20 L. Ed. 209.

Defendants were innocent infringers. When they discovered the fact they purchased a legal title to the patent for their territory. *Held:* that such

purchase converted their act into a legal right and was equivalent to an original lawful purchase or manufacture of the machine. — Eunson *v.* Dodge, 85 U. S. 414; 21 L. Ed. 766.

When the thing patented is an entirety, consisting of a separate device or of a single combination of old elements incapable of division or separate use, the respondent cannot make good the defense in question by proving that a part of the entire invention is found in one prior patent, printed publication or machine and another part in another, and so on indefinitely, and from the whole or any given number expect the court to determine the issue of novelty adversely to the complainant.

Common justice forbids such a defense, as it would work a virtual repeal of so much of the Patent Act as gives to inventors the right to a patent consisting of old elements, when the combination itself is new and produces a new and useful result. New elements in such a patent are not required, and if such a defense were allowed, not one patent of the kind in a thousand of modern date could be held valid. Nor is such a defense consistent with the regulations enacted by Congress in respect to the procedure in litigations in respect to patent rights. — Parks *v.* Booth 102 U. S. 96; 26 L. Ed. 54.

Imhauser *v.* Buerk, 101 U. S. 647.

The contention that the device of the patent sued on was not successful, where the failure appears to have been due to other defects in the machine will not be regarded as important. — Gordon *v.* Warder, 150 U. S. 47; 37 L. Ed. 992; 14 S. Ct. 32.

Although the original machine was wanting in accuracy of operation and could not always be depended on, the machine did practical work. It was an operative machine, and demonstrated to the world the practicability and utility of the invention. It matters little that there was a lack of mathematical accuracy, and certainly the defect affords no defense here. — Rogers *v.* Mergenthaler, 64 Fed. 799; 12 C. C. A. 422.

The patent in suit specified " chamotte " as a specific, required element to the compound. The defendant contended that " chamotte " was merely one form of fire-clay, and as the use of fire-clay for the process of the patent was old the claim was bad. *Held:* Inasmuch as the term " fire-brick " if used in the patent would not have sufficiently identified the peculiar product to enable one skilled in the art to produce the patented product, but would have obliged him to experiment with the various materials known under said name, we think the patentee was justified in the use of said word; that it may even have been necessary to a full disclosure of his alleged invention; and that, in view of the evidence, the court correctly found that fire-brick was not necessarily the equivalent of chamotte. — Panzl *v.* Battle Island, 138 Fed. 48; 70 C. C. A. 474.

It is urged on us that the complainant made no commercial use of the patented device; but, utility and patentability being otherwise established, we are not required to investigate the excuse given by complainant for non-user. — Draper *v.* American, 161 Fed. 728; 88 C. C. A. 588.

It is objected that no machine, conforming to the specification of the first patent, was ever used or put upon the market. During the life of his monopoly, a patentee is under no obligation to use or place upon the market a device or machine embodying his invention. — Lewis *v.* Premium, 163 Fed. 950; C. C. A.

Continental *v.* Eastern, 210 U. S. 405.

§ 485. Division or Union of Parts or Elements.

It does not void infringement to make an element of the patent infringed integral with another part. — Capital *v.* National, 70 Fed. 709; 17 C. C. A. 355.

Approving, 53 Fed. 367.

One may not escape infringement by the mere joinder of two elements into one integral part. If the united parts affect the same result, in substantially the same way as the separate parts before the union, the change is colorable. — Bundy *v.* Detroit, 94 Fed. 524; 36 C. C. A. 375.

McDonald *v.* Whitney, 24 Fed. 600; Ballard *v.* McCluskey, 58 Fed. 880; Dish Co. *v.* Sandy, 60 Fed. 285.

That subdividing a part or combining two parts in one without change of function is not ordinarily invention, see Kalamazoo *v.* Duff, 113 Fed. 264; 51 C. C. A. 221.

Bundy *v.* Detroit, 94 Fed. 524; Sessions *v.* Gould, 49 Fed. 855.

That forming an article in two parts which, under the patent was made in one piece, does not avoid the infringement, see Kahn *v.* Starrels, 135 Fed. 532; 68 C. C. A. 82.

Lepper *v.* Randall, 113 Fed. 627.

Neither the joinder of two elements into one integral part accomplishing the purpose of both and no more, nor the separation of one integral part into two, together doing precisely or substantially what was done by the single element, will evade a charge of infringement. This principle is even more applicable when the change made relates to mere matter of form not of the essence of the invention. — Nathan *v.* Howard, 143 Fed. 889; 75 C. C. A. 97.

Bundy *v.* Detroit, 94 Fed. 524; Dowagiac *v.* Brennen, 127 Fed. 150; Winans *v.* Denmead, 15 How. 330.

The mere joinder of two elements into one integral part or the separation of one part into two may be an infringement if the change in the structure accomplishes the same results in substantially the same way. — Dunlap *v.* Willbrandt, 151 Fed. 223; 80 C. C. A. 575.

Of course there are cases in which, in determining whether a subsequent device infringes, it is unimportant whether it is made in two pieces instead of three, or whether a member is mechanically attached to the remainder of the structure or made integral with it. They are, however, inapplicable to a case in which the very divisibility into parts or in which the particular method of attachment constitutes the law of the structure or is declared or appears to be of the essence of the supposed invention. — Dunlap *v.* Willbrandt, 151 Fed. 223; 80 C. C. A. 575.

Clough *v.* Barker, 106 U. S. 166; Standard *v.* Caster, 113 Fed. 162; Mabie *v.* Haskall, 2 Cliff. 507.

§ 486. Duplication.

If the inventor has sufficiently described and pointed out his improvement to meet the requirement of the patent law, then he is not to be deprived of the benefit of this feature because, by a duplication of his wheels, this advantage can be obtained to a greater degree. Appellant cannot escape liability as an infringer by a mere duplication of the combination. That is a

mere carrying forward of his idea, duplicating the parts, doing the thing in identically the same way, with better results. — Goshen *v.* Bissell, 72 Fed. 67; 19 C. C. A. 13.

Roberts *v.* Ryer, 91 U. S. 150; Belding *v.* Challenge, 152 U. S. 107.

It seems clear to us that Anderson took the principle of Bonnette's invention, and merely doubled the parts. It is well settled that the mere doubling of parts to produce the same result does not prevent infringement, even though it may involve tributary invention. — Bonnette *v.* Koehler, 82 Fed. 428; 27 C. C. A. 200.

The defendant's spike point embodies all that was of value in the Goldie device, and the mere duplication of the point does not enable the defendants to evade the charge of infringement. — Diamond *v.* Goldie, 84 Fed. 972; 28 C. C. A. 589.

Hoyt *v.* Horne, 145 U. S. 302.

There is, moreover, a class of cases to which we cannot broadly apply the rule that results which may be gained by a device are protected although not foreseen by the patentee; in other words, cases in which the rule of "double use," as it is often called, does not apply in behalf of the inventor. They all turn on the fact that, under peculiar circumstances, the application to some particular purpose of an element used generally throughout the arts or an improvement in various details as in the present case, amounts to invention, on account of the particular end accomplished, although the patent issues for the device, and not for the process, product, or result. Ordinarily, such inventions are of a limited or low order, and must be restricted to the express purposes pointed out by the inventor, or they obstruct the advance of the beneficial arts, rather than assist it. — Davey *v.* Prouty Co. 107 Fed. 505; 46 C. C. A. 439.

Electric *v.* LaRue, 139 U. S. 601; Watson *v.* Stevens, 15 Fed. 757; Consolidated *v.* West End, 85 Fed. 664; Electric *v.* Fuller, 59 Fed. 1005.

§ 487. Evidence of — Acts of Defendant.

The conduct of defendant, by way of evasive pleading and testimony and unsatisfactory answer to interrogatories, evidences infringement. — Agawam *v.* Jordan, 74 U. S. 583; 19 L. Ed. 177.

Infringement by defendant is evidence as against him of the utility of the thing patented. — Gandy *v.* Main, 143 U. S. 582; 36 L. Ed. 272; 12 S. Ct. 598.

Ingenuity displayed in the evasion of the salient feature of an invention and in concealing the same as an element in a subsequent application will be considered favorably in determining novelty. — Hoyt *v.* Horne, 145 U. S. 302; 36 L. Ed. 713; 12 S. Ct. 922.

Winans *v.* Denmead, 56 U. S. 330.

Actions often speak louder, and frequently more truthfully than words. It is not impossible that the reason why the appellees are not using the old devices they plead is that the improvements described in this patent have made them useless and unmerchantable. If this is not so, they can abandon the improvements of these patentees, and go back to the devices they plead. — Griswold *v.* Harker, 62 Fed. 389; 10 C. C. A. 435.

Apparently defendants used the patented device, denied infringement, and refused to disclose the exact use and workings of the device. *Held:*

The course of defendants naturally subjects them to unfavorable comment, and throws a certain suspicion on the device, which it is impossible to entirely cast aside. But this circumstance cannot influence the judgment of the court. Its duty still remains to decide these cases simply upon the evidence presented. — Goodyear *v.* Spaulding, 110 Fed. 393; 49 C. C. A. 88.

Note: True, in this case, the court did so decide; but I think that if the question had been a very close one, the conduct of the defendant would have unconsciously led the court against him.

The persistency with which the defendant clings to the vertical rotatable plug (the device of the patent in suit) furnishes one of the principal reasons which leads us to reject the defense of non-patentability. — Empire *v.* Sears, 160 Fed. 668; 87 C. C. A. 556.

§ 488. Evidence of — Burden.

The burden is upon plaintiff to establish both the allegation of invention and that of infringement. — Mitchell *v.* Tilghman, 86 U. S. 287; 22 L. Ed. 125.

Seymour *v.* Osborne, 11 Wall. 538.

The burden of proof of infringement is upon the complainant. — Price *v.* Kelly, 154 U. S. 669; 26 L. Ed. 634; 14 S. Ct. 1208.

§ 489. Evidence of — Expert.

Expert witnesses on both sides have been examined also upon the issue of infringement, but they differ so widely in opinion that their testimony affords the court but little aid in determining the question, which, after all, must depend chiefly upon the comparison of the descriptive portions of the two specifications. — Mitchell *v.* Tilghman, 86 U. S. 287; 22 L. Ed. 125.

Hill *v.* Thompson, 1 Web. P. C. 232; Turner *v.* Winter, 1 Web. P. C. 77.

§ 490. Evidence of — Function.

On a legal construction of this claim, anything which does not possess this function and this action, no matter to what extent in other particulars it may answer its cause, does not infringe it. — Eppler *v.* Campbell, 86 Fed. 141; 29 C. C. A. 616.

That the defendant's meter and the meter of the Youngs patent may effect the same result is not determinative of the question of infringement. — Pittsburg *v.* Pittsburg, 109 Fed. 644; 48 C. C. A. 580.

Water-Meter *v.* Desper, 101 U. S. 332; Westinghouse *v.* Brake Co. 170 U. S. 537.

That their apparatus has the capacity of readjusting the position of the packer in the well, and resetting it above or below its original position, is not conclusive of the question of infringement. — Masseth *v.* Larkin, 119 Fed. 171; 56 C. C. A. 167.

O'Reilly *v.* Morse, 15 How. 62; Westinghouse *v.* Brake Co. 170 U. S. 537.

The element of "a wrapping mechanism" in appellee's machine cannot also be the element of a "twisting mechanism" in the sense of appellant's claims merely because the wrapping mechanism inevitably tends to give a slight twist to the pliable strands. — American *v.* Choate, 159 Fed. 429; 86 C. C. A. 409.

Ajax *v.* Pettibone. 125 Fed. 748.

§ 491. Evidence of — Identity.

If the patent in suit is limited by the state of the art to a specific construction, a claim, to be valid, cannot be construed to cover a device employing a mechanism not the equivalent thereof. — Grier *v.* Wilt, 120 U. S. 412; 30 L. Ed. 712; 7 S. Ct. 718.

The jury will not consider any former device to be an anticipation unless they believe such former device developed the same mode of operation as the device described in the plaintiff's patent. — Haines *v.* McLaughlin, 135 U. S. 584; 22 L. Ed. 241; 10 S. Ct. 876.

§ 492. Evidence of — Law Actions.

The claim in the specification was for a combination of such parts of the described mechanism as were necessary to the operation of the device. The defendants had not infringed the patent unless they had used all the parts embraced in the plaintiff's combination. It was a question for the jury to find what those parts were, and whether the defendants had used them. — Silsby *v.* Foote, 14 How. 218; 14 L. Ed. 394.

The question of anticipation is purely a question of fact, and is exclusively for the jury to determine. — Haines *v.* McLaughlin, 135 U. S. 584; 22 L. Ed. 241; 10 S. Ct. 876.

We think the circuit court erred in not submitting to the jury the question of infringement, under proper instructions. If the patented invention was within the rule in Morley *v.* Lancaster, 129 U. S. 263, "one of a primary character," and the patent was "a pioneer patent," which were questions of fact to be passed upon by the jury, then the question, on a proper construction of the patent, whether the defendant's machine infringed its claims, was a question of fact for the jury to determine, on all the evidence which the case might present. — Royer *v.* Schultz, 135 U. S. 319; 34 L. Ed. 214; 10 S. Ct. 833.

Tucker *v.* Spalding, 80 U. S. 453.

It was not a matter of mere judicial knowledge that the mechanical differences between the two machines were material, in view of the character of the patented invention and of the claims of the patent; and we are unable to concur with the view of the circuit court (29 Fed. 281) that this is a case where, if the jury had found a verdict for the plaintiff, on the evidence put in by him on the question of infringement, all of which evidence the bill of exceptions states is set forth therein, it would have been proper for the court to set aside such verdict. — Royer *v.* Schultz, 135 U. S. 319; 34 L. Ed. 214; 10 S. Ct. 833.

Keyes *v.* Grant, 118 U. S. 25.

§ 493. Evidence of — Parol.

Oral testimony, unsupported by patents or exhibits, tending to show prior use of a device regularly patented is, in the nature of the case, open to grave suspicion. — Deering *v.* Winona, 155 U. S. 286; 39 L. Ed. 153; 15 S. Ct. 118.

Washburn *v.* Beat Em All, 143 U. S. 275.

§ 494. Evidence of — Sufficiency.

The proper evidence from which to determine the infringement is the patent in suit and the device made by the defendant. — Blanchard *v.* Putnam, 75 U. S. 420; 19 L. Ed. 433.

Persons seeking redress for the unlawful use of letters patent, in which they have an interest, are obliged to allege and prove that they, or those under whom they claim, are the original and first inventors of the improvement embodied in the letters patent on which the suit is founded, and that the same has been infringed by the party against whom the suit is brought. The burden of proof is upon the party instituting the suit. The letters patent, if in due form, and introduced in evidence are prima facie proof of the first allegation, and in the absence of proof to the contrary afford a presumption sufficient for a recovery. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

Infringement must not only be alleged but must be specifically proved by the complainant. — Imhauser *v.* Buerk, 101 U. S. 647; 25 L. Ed. 945.

Where denial of infringement is made in the answer under oath, infringement must be shown by satisfactory proof. — Lehigh *v.* Mellon, 104 U. S. 112; 26 L. Ed. 639.

To establish infringement there must be a preponderance of evidence in complainant's favor. — Béné *v.* Jeantet, 129 U. S. 683; 32 L. Ed. 803; 9 S. Ct. 428.

As this is not the only way in which the parts may be attached, it was incumbent on the plaintiff to show that the defendant used castings and bottom plates of that fashion; otherwise infringement is not proved. — Canda *v.* Michigan, 124 Fed. 486; 61 C. C. A. 194.

A single sale made in circumstances which indicate a readiness to make other similar sales upon application is sufficient to make out a prima facie case. — Hutter *v.* De Q. Bottle, 128 Fed. 283; 62 C. C. A. 652.

That the proof of infringement must be positive, and that testimony of infringing articles "substantially identical" and "good representations" is insufficient, see Gray *v.* Grinberg, 159 Fed. 138; 86 C. C. A. 328.

The burden of proof rested upon the complainant to show a completed act of infringement. The defendant's alleged threatened infringement was insufficient. — Gray *v.* Grinberg, 159 Fed. 138; 86 C. C. A. 328.

Westinghouse *v.* Stanley, 116 Fed. 641.

§ 495. Evidence of — Utility — Use by Defendant.

It does not lie in the mouth of an infringer to deny the utility of the device of the patent in suit. The presumptions at least are against him. — DuBois *v.* Kirk, 158 U. S. 58; 39 L. Ed. 895; 15 S. Ct. 729.

Lehnbeuter *v.* Holthaus, 105 U. S. 94; Western *v.* LaRue, 139 U. S. 601; Gandy *v.* Main, 143 U. S. 577.

The facts that its usefulness is not denied, and that the appellant has seen fit to depart from the many devices open to his use, and to adopt that of the appellee, strongly indicate that it marks a distinct and useful advance in the progress of this art. — Brammer *v.* Schroeder, 106 Fed. 918; 46 C. C. A. 41.

We may add that the evidence warrants the conclusion that complainant's lantern never went into practical use, whereas the defendant's lantern has gone into extensive public use. Of course, these facts as to use are by no means decisive, but they tend to negative the charge of infringement. — Raymond *v.* Keystone, 134 Fed. 866; 67 C. C. A. 492.

§ 496. Evidence of — Miscellaneous Holdings.

The question of infringement is a mixed question of fact and of law. — California *v.* Molitor, 113 U. S. 609; 28 L. Ed. 1106; 5 S. Ct. 618.

Where there is evidence contradictory of the infringement, we cannot, in the absence of ocular inspection, take it upon ourselves to say that the circuit court erred in finding infringement. — Dobson *v.* Dornan, 118 U. S. 10; 30 L. Ed. 603; 6 S. Ct. 946.

If the method pursued by the patentee for the performance of the function discovered by him would naturally have suggested the device adopted by the defendant, that is in itself evidence of an intended infringement; but although Mr. Boyden may have intended to accomplish the same results, the Westinghouse patent if he had had it before him, would scarcely have suggested the method he adopted to accomplish these results. Under such circumstances, the law entitles him to the rights of an independent inventor. — Westinghouse *v.* Boyden, 170 U. S. 537; 42 L. Ed. 1136; 18 S. Ct. 707.

The question of infringement or no infringement is one of law, and susceptible of determination on this writ of error. — Singer *v.* Cramer, 192 U. S. 265; 48 L. Ed. 437; 24 S. Ct. 291.

Heald *v.* Rice, 104 U. S. 737; Market *v.* Rowley, 155 U. S. 621.

The action was upon a patent for a current regulator. Anticipation was set up under a former patent to the same parties upon a sparking regulator. Expert proof determined that a device made according to either patent could be determined to perform the function of the other only by experimental tests. *Held:* This alone ought to be conclusive of the dispute. When such tests are necessary to distinguish one device from another, it is a manifestly impracticable, not to say dangerous, proposition that the making or using of either under a given patent may be declared to be an infringement of a different patent upon the other. — Thomson-Houston *v.* Western, 70 Fed. 69; 16 C. C. A. 642.

It is manifest on the face of the patent that the specification was prepared by one perfectly familiar with the Shuman invention, and that there is a studied effort throughout the patent to differentiate the alleged invention thereof from his. — Streator *v.* Wire-Glass Co. 97 Fed. 950; 38 C. C. A. 573.

The applications for both patents were pending in the Patent Office at the same time, and the decision of that office that no interference was found in the claims on the part of the appellee, and the subsequent draft of both patents, with the modifications in the Leslie claims as shown in the record, are strongly corroborative of this view of non-infringement. — Mann *v.* Hoffmann, 104 Fed. 245; 43 C. C. A. 514.

The evidence was not admitted for the purpose of showing what was the intention of the corporation. It was admitted for the purpose of explaining the language of the articles. The articles referred to the manufacture of directory machines, without describing or specifying them. It is evident that the incorporators had some particular machine in view. Such being the case, any witness who knew what was referred to was competent to testify as to that fact. — National *v.* Polk, 121 Fed. 742; 58 C. C. A. 24.

When the question of infringement depends entirely upon the construction of a patent, either upon its face or in connection with facts of such a nature

and effect as not to be reasonably disputed, the question is one of law for the court. — Western *v.* Robertson, 142 Fed. 471; 73 C. C. A. 587.

De Loriea *v.* Whitney, 63 Fed. 611; Black Diamond *v.* Excelsior, 156 U. S. 611; Singer *v.* Cramer, 192 U. S. 265.

There is no dispute of fact in regard to the features of the cans manufactured by the defendant, and the opinions of the experts upon the question whether or not they embody all the essential parts of the claim are of no assistance to the court, because their value depends altogether upon the construction to be given to the claim, and this is a matter wholly for the court. — Ironclad *v.* Dairyman's, 143 Fed. 512; 74 C. C. A. 372.

The defendant filed application for patent on the device here in infringement and the claims were rejected on the patent here sued on. *Held:* This acquiescence is persuasive evidence of an admission on the part of the patentee of the defendant's car that the O'Leary device was an anticipation, or at least a disclosure, of certain of the elements of defendant's construction, and therefore is persuasive evidence of an admission that if the means covered by said claims were later than those covered by the patent in suit, they would be an infringement thereof. — O'Leary *v.* Utica, 144 Fed. 399; 75 C. C. A. 377.

The issuance of a patent to the appellee creates a prima facie presumption of a patentable difference from the invention of the patent sued on. — Hardison *v.* Brinkman, 156 Fed. 962; 87 C. C. A. 8.

Miller *v.* Eagle, 151 U. S. 186.

It is not disputed that there is no proof in the record that such cables were made, sold, or used by defendant before Feb. 1900, a year and a half after the bill was filed. This alleged sample, therefore, cannot be considered in determining the question of infringement. — National *v.* Roebling's, 158 Fed. 99; 85 C. C. A. 567.

The complainant introduced "Complainant's Exhibit Scott Bustle," the counsel for the respective parties having previously agreed "that the same is a fair specimen of the device of the patent in suit." This is, in effect, an admission that the bustle purchased of the defendant is substantially identical with the one made under the patent, or, in other words, it is an admission of infringement. However, as counsel for the defendants insist that the stipulation was made inadvertently and under a misapprehension of the facts, we think the defendants should not be foreclosed thereby. — Scott *v.* Lazell, 160 Fed. 472; 87 C. C. A. 456.

That the grant of a subsequent patent to the same inventor is presumptive evidence that the first patent is not infringed by manufacture under the second patent, see D'Arcy *v.* Staples, 161 Fed. 733; 88 C. C. A. 606.

Miller *v.* Eagle, 151 U. S. 186.

It is urged upon us that inasmuch as the bill of complaint was brought in a district in which the defendants are not inhabitants, the burden of proof was upon the complainant to show a complete act of infringement in such district — otherwise the Circuit Court for that district would be without jurisdiction to hear the cause; and the case of Gray *v.* Grinberg, 159 Fed. 138, along with other cases is cited. The usual rule is that whether a defendant shall be required to defend in a court other than the Circuit Court for the district of which he is an inhabitant is a question of privilege that he may insist upon or waive, at pleasure. Gray *v.* Grinberg is not opposed

to this rule. The question in that case was, whether as a matter of procedure, the defendant had waived that privilege — whether by the bill alleging that infringing acts had been committed within the district, an issue of fact involving the question of privilege was not thereby tendered — an averment of fact that the defendant, wishing not to waive, but to exercise his privilege, had not the right to traverse by answer. We need not enter, however, into this question of procedure, for the proof before us satisfies us — all the circumstances being taken into consideration — that acts of infringement were actually committed within the district where the suit was brought, and before the suit was brought. — American Mattress *v.* Springfield, 165 Fed. 191; C. C. A.

§ 497. Generic Patent.

Those claims are not for a result or effect, irrespective of the means by which the effect is accomplished. It is open to a subsequent inventor to accomplish the same result, if he can, by substantially different means. The effect of the rule before laid down is merely to require that, in determining whether the means employed in the defendant's machine, are substantially the same means as those employed in complainant's machine, the complainant's patent is to receive a liberal construction, in view of the fact that he was a pioneer in the construction of an automatic button-sewing machine, and that his patent, especially in view of the character and terms of the four claims in question, is not to be limited to the particular devices or instrumentalities described by him, used in the three main elements of his machine, which, combined together make it up. This is the principle applied by this court in Consolidated *v.* Crosby, 113 U. S. 157. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

Where an invention is one of a primary character, and the mechanical functions performed by the machine are, as a whole, entirely new, all subsequent machines which employ substantially the same means to accomplish the same result are infringements, although the subsequent machine may contain improvements in the separate mechanisms which go to make up the machine. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

McCormick *v.* Talcott, 61 U. S. 402; Chicago *v.* Sayles, 97 U. S. 554; Clough *v.* Barker, 106 U. S. 166; Duff *v.* Sterling, 107 U. S. 636; Consolidated *v.* Crosby, 113 U. S. 157; Tilghman *v.* Proctor, 102 U. S. 707; Nelson *v.* Hartford, 1 Web. P. C. 295.

If the plaintiff had invented an entirely new process, which had revolutionized the art, it might be that the court ought to give that broad construction to the patent which was justified in the case of a foundation patent; but when, as in this case, all the substantial steps in the process were old, the utmost that the plaintiff was entitled to was protection against those who used, in substance, his precise forms. — Royer *v.* Coupe, 146 U. S. 524; 36 L. Ed. 1073; 13 S. Ct. 166.

Norton being the original inventor, he, and those claiming under him, would have the right to treat as infringers all persons who make devices or machines operating on the same principle and performing the same functions by analogous means or equivalent combinations, even though the infringing machine may be an improvement of the original, and patentable as such. — Norton *v.* Jensen, 49 Fed. 859; 1 C. C. A. 452.

McCormick *v.* Talcott, 20 How. 405; Wells *v.* Gill, 1 Ban. & A. 77; Kendrick *v.* Emmons, 2 Ban. & A. 208; Turrell *v.* Spaeth, 3 Ban. & A. 458; Colt *v.* Arms Co.

1 Fish. P. C. 108; Winans *v.* Railroad, 4 Fish. P. C. 2; Whipple *v.* Mfg. Co. 4 Fish. P. C. 29; Fruit Co. *v.* Curran, 8 Fed. 150.

With respect to such a patent (a pioneer) the well-settled rule is that the patentee who has, by the success of his patent, pointed out the combination of functions needed to reach the new result, and has claimed the combination of mechanical parts performing those functions, may enjoin the use of another machine producing the same result where the second machine differs from the first only in a substitution, for parts or elements in the patented device, of parts or elements which though different in form and kind, perform the same functions in substantially the same way. It may be that the substituted parts are well known equivalents of those shown in the patent for the performance of the functions to which they are respectively applied, in which case there is manifestly no inventive faculty shown in the change; or it may be that, being shown by the successful operation of the patent the exact nature of the functions to be performed by a part of the patented device, the infringer, by the use of his inventive faculty, hits upon something as a substitute which will perform the same functions more completely and satisfactorily. In the latter case he is a tributary inventor; but he is none the less an infringer if he uses the whole machine, with his substituted parts to accomplish the same new result. The rule as to infringement of pioneer inventions which point the way to new products or results is analogous to that applied in cases of infringements of process patents in which the discoverer is only required to point out one practical method of using his process, and is permitted to claim tribute from all who thereafter use the process, whether with his apparatus or with a different or improved means. In Machine Co. *v.* Lancaster, 129 U. S. 263, the Supreme Court said:

Where an invention is of a primary character and the mechanical functions performed by the machine as a whole are entirely new, all subsequent machines which employ substantially the same means to accomplish the same result are infringements, although the subsequent machine may contain improvements in the separate mechanisms which go to make up the machine. — McCormick *v.* Aultman, 69 Fed. 371; 16 C. C. A. 259.

Consolidated *v.* Crosby, 113 U. S. 157; Royer *v.* Belting Co. 135 U. S. 319; Machine Co. *v.* Murphy, 97 U. S. 120; Sessions *v.* Romadka, 145 U. S. 29; Clough *v.* Barker, 106 U. S. 160; Winans *v.* Denmead, 15 How. 330; McCormick *v.* Talcott, 20 How. 402; Railway *v.* Sayles, 97 U. S. 554.

All subsequent machines which employ substantially the same means to accomplish the same results are infringements, notwithstanding the subsequent machine may contain improvements in separate mechanism which go to make up the machine. — VonSchmidt *v.* Bowers, 80 Fed. 121; 25 C. C. A. 323.

McCormick *v.* Talcott, 20 How. 402; Railway *v.* Sayles, 97 U. S. 554; Clough *v.* Barker, 106 U. S. 166; Consolidated *v.* Crosby, 113 U. S. 517.

Where a patent represents a marked advance in the art, such a patent is called a "pioneer;" and the courts in its construction, have adopted a liberal rule with respect to equivalents. While the Morris patent describes a machine of the "pioneer" type, it did not solve the problem. No practical machine embodying the invention has ever been constructed. The successful solution of the problem was subsequently attained in a patented machine constructed on a different principle. The Morris machine having proved a practical failure, it is manifest that the defendant's machine cannot be held to infringe. — Ford *v.* Bancroft, 98 Fed. 309; 39 C. C. A. 91.

Machine *v.* Lancaster, 129 U. S. 263; Reece *v.* Globe, 61 Fed. 958.

§ 498. By Government.

If an officer in the military service, not especially employed to make experiments with a view to suggest improvements, devises a new and useful improvement in arms, tents, or any other kind of war material, he is entitled to the benefit of it and to letters patent for the improvement, equally with any other citizen not engaged in such service; and the Government cannot, after the patent is issued, make use of the improvement any more than a private individual, without license of the inventor or making compensation to him. — United States *v.* Burns, 79 U. S. 246; 20 L. Ed. 388.

Unlawful use by a government employee is infringement. — Cammeyer *v.* Newton, 94 U. S. 225; 24 L. Ed. 72.

Mitchell *v.* Harmony, 13 How. 115; U. S. *v.* Russell, 13 Wall. 623; U. S. *v.* Burns, 12 Wall. 246.

The exemption of the United States from judicial process does not protect their officers and agents, civil or military, in time of peace from being personally liable to an action of tort by a private person whose rights of property they have wrongfully invaded or injured, even by authority of the United States. — Belknap *v.* Schild, 161 U. S. 10; 16 L. Ed. 599; 16 S. Ct. 443.

Little *v.* Barreme, 6 U. S. 170; Bates *v.* Clark, 95 U. S. 204; Cammeyer *v.* Newton, 94 U. S. 225; Feather *v.* Queen, 6 Best & S. 257; Vavasseur *v.* Krupp, L. R. 9 Ch. Div. 351.

The United States have not consented to be liable to suits founded in tort, for wrongs done by their officers, though in the discharge of their official duties. The United States, therefore, are not liable to a suit for an infringement of a patent, that being an action sounding in tort. — Belknap *v.* Schild, 161 U. S. 10; 16 L. Ed. 599; 16 S. Ct. 443.

Gibbons *v.* U. S. 75 U. S. 269; Morgan *v.* U. S. 81 U. S. 531; Langford *v.* U. S. 101 U. S. 341; U. S. *v.* Jones, 131 U. S. 1; German *v.* U. S. 148 U. S. 573; Hill *v.* U. S. 149 U. S. 593; Schillinger *v.* U.S. 155 U. S. 163; U.S. *v.* Berdan, 156 U. S. 552.

This court has repeatedly and uniformly held that the United States have no more right than any private person to use a patented invention without license of the patentee or making compensation to him. — Belknap *v.* Schild, 161 U. S. 10; 16 L. Ed. 599; 16 S. Ct. 443.

U. S. *v.* Burns, 79 U. S. 246; Cammeyer *v.* Newton, 94 U. S. 225; James *v.* Campbell, 104 U. S. 356; Hollister *v.* Benedict, 113 U. S. 59; U. S. *v.* Palmer, 128 U. S. 262.

The United States cannot be sued in their courts without their consent, and they cannot be sued for tort, as for the infringement of a patent. — Schillinger *v.* U. S. 155 U. S. 163; 39 L. Ed. 108; 15 S. Ct. 85.

Gibbons *v.* Wilson, 75 U. S. 269; Morgan *v.* U. S. 81 U. S. 531; Hill *v.* U. S. 149 U. S. 593; U. S. *v.* Palmer, 128 U. S. 262; U. S. *v.* Russell, 80 U. S. 623; U. S. *v.* Great Falls, 112 U. S. 645.

The United States may appropriate and use the invention of an individual for its necessary uses, the fifth amendment to the constitution requiring only that due compensation shall be made. But this provision does not prescribe that the usual method of condemnation of property is essential. (In this case the Chief of Ordnances wanted to use a certain breech-loading mechanism, which was patented to complainant's assignor, and he proceeded to use it without license or right.) It does not appear, and it was not the fact that this was the only mechanism available. — Dashiell *v.* Grosvenor, 66 Fed. 334; 13 C. C. A. 593.

Kohl *v.* U. S. 91 U. S. 367; James *v.* Campbell, 104 U. S. 356; U. S. *v.* Great Falls, 112 U. S. 645; Hollister *v.* Benedict, 113 U. S. 59; U. S. *v.* Palmer, 128 U. S. 262; Schillinger's Case, 24 Ct. Cl. 278; Gill's Case, 25 Ct. Cl. 415; Berdan's Case, 26 Ct. Cl. 48.

§ 499. Identity — Equivalents.

He is entitled to protect himself from all other modes of making the same application; and every question of infringement will present the question whether the different mode, be it better or worse, is in substance an application of the same principle. — Sewall *v.* Jones, 91 U. S. 171; 23 L. Ed. 275.

Curtis, sec. 320.

A construction employing substantial equivalents of mechanism and performing the same function is an infringement. — Gage *v.* Herring, 107 U. S. 640; 27 L. Ed. 601; 2 S. Ct. 819.

Gould *v.* Rees, 15 Wall. 187; Ives *v.* Hamilton, 92 U. S. 426; Machine *v.* Murphy, 97 U. S. 120.

The bolt and the clevis perform the same office in the two structures, and the mechanical differences are merely formal and not substantial. The combination consists of the same four parts, differing only in form. — Lake Shore *v.* National, 110 U. S. 229; 28 L. Ed. 129; 4 S. Ct. 33.

Where a defendant employs substantially the same devices as the plaintiff, but seems to have adopted prior and known means rather than to have purloined the device of plaintiff it will be considered in determining infringement. — Pope *v.* Gormully, 144 U. S. 254; 36 L. Ed. 420; 12 S. Ct. 637.

The specification was coextensive with the actual invention, and described three methods of construction. The defendant took one of the methods of construction described in the specification and included in the claim. It is not of importance that it did not take the best method which was so described. — Judd Co. *v.* Fowler, 61 Fed. 821; 10 C. C. A. 100.

Two devices doing the same thing in substantially the same way with substantially the same result are the same in the patent sense. — Thomson-Houston *v.* National, 65 Fed. 427; 12 C. C. A. 671.

Machine *v.* Murphy, 97 U. S. 120.

It is no less true that a copy of the thing described and claimed in a patent either without variation, or with such variations as are consistent with its being in substance the same thing, is, for all the purposes of the patent law, the same device or combination as that described in the patent. — Kinloch *v.* Western, 113 Fed. 652; 51 C. C. A. 362.

Burr *v.* Duryee, 1 Wall. 531.

§ 500. Identity — Means Employed.

An infringement involves substantial identity, whether that identity be described by the terms "same principle," same "modus operandi" or any other. — Burr *v.* Duryee, 68 U. S. 531; 17 L. Ed. 750.

Two things are not the same under the patent law, when one is, in practice, substantially better than the other in a case where the second improvement is not gained by the use of the same means or known mechanical equivalents. — Mitchell *v.* Tilghman, 86 U. S. 287; 22 L. Ed. 125.

Curt. Pat. sec. 330.

Identity of detail in a combination like the one under consideration, is not necessary in order to constitute infringement. The patentee took pains to point out that "the specific construction of the mechanism shown . . . is not essential." This was unnecessary precaution; the law gave him ample protection in this regard. — International *v.* Dey, 142 Fed. 736; 74 C. C. A. 68.

Machine *v.* Murphy, 97 U. S. 120.

§ 501. Identity — Non-Essentials.

Slight differences in degree cannot be regarded as of weight in determining the question of substantial similarity or substantial difference, but in all cases the question whether the difference in degree is insufficient to prove the alleged infringement is a question of fact to be determined by the jury in an action at law, or by the court in a suit in equity. — Mitchell *v.* Tilghman, 86 U. S. 287; 22 L. Ed. 125.

Cahoon *v.* Ring, 1 Cliff. 621.

But it is no less an infringement if it performs its primary function in practically the same way. We are not concerned with the subordinate differences in the mechanism, least of all with the different names given by Horton to parts of his machine similar to the corresponding parts in the Beach patent. As the two machines are alike in their functions, combination and elements, it is unnecessary to go farther and inquire whether they are alike or unlike in their detail. — Hobbs *v.* Beach, 180 U. S. 383; 45 L. Ed. 586; 21 S. Ct. 409.

The substantial identity of the Walker and Birkenhead rests is not affected by the circumstance that in that of the former it is composed of one part, while that of the latter is composed of two. — Eames *v.* Worcester, 123 Fed. 67; 60 C. C. A. 37.

Rob. Pat. sec. 252; Stearns *v.* Russell, 85 Fed. 218; Brown *v.* King, 107 Fed. 498.

The rule is well settled that if two machines be substantially the same, and operate in the same manner, though they may differ in form, proportion and utility, they are the same in principle. — Los Angeles *v.* Aeolian, 143 Fed. 880; 75 C. C. A. 88.

Converse *v.* Cannon, 2 Woods, 7; Machine *v.* Murphy, 97 U. S. 120; Cantrell *v.* Wallick, 117 U. S. 689; Blandy *v.* Griffith, 3 Fish. P. C. 609; Walker on Pat. sec. 376; Rob. on Pat. sec. 30; Curtis on Pat. sec. 320.

§ 502. Identity — Result or Function.

The fact that by careful workmanship the products are indistinguishable by mere inspection does not establish the identity of the processes; and as the patent for the product must be limited to an article made by the particular process, the inquiry must be determined by a comparison between the methods actually employed. — Plummer *v.* Sargent, 120 U. S. 442; 30 L. Ed. 737; 7 S. Ct. 640.

This result being different from that in the plaintiff's device, the mechanism is different and is not an equivalent of that of the plaintiff. — Grier *v.* Wilt, 120 U. S. 412; 30 L. Ed. 712; 7 S. Ct. 718.

Looking at the improvement in issue in view of the cases cited, it consists of mechanical details accomplishing a useful result, but of a low order; and the mechanical details of respondent's devices are different, in the sense

of the patent law, and accomplish a result also in a large part different, and cannot be held to infringe. — Electric *v.* Fuller, 59 Fed. 1003; 8 C. C. A. 442.

Knapp *v.* Morss, 150 U. S. 221; Gordon *v.* Warder, 150 U. S. 47.

If it be conceded that it will do that work in substantially the same way, infringement is not thereby established. Substantial identity between the combinations must be found in their capacity to do the same work in substantially the same way, and it does not suffice to show that they will do one part of their work. The argument for complainant seems to proceed upon the theory that the combinations are substantially the same because each will perform the several operations of the system, and each is composed of essentially the same devices. The answer is that the differences in organization introduce different modes of operation except in a single instance, and the identity is incomplete, being partial, instead of general. — Westinghouse *v.* N. Y. 119 Fed. 874; 56 C. C. A. 404.

That the two machines of respondents and complainants both accomplish the same result may be conceded, but identity of result is not the test of infringement. There must in the ordinary patent be identity of means and identity of operation as well. — American *v.* Cimiotti, 123 Fed. 869; 59 C. C. A. 357.

Kokomo *v.* Kitselman, 189 U. S. 8.

§ 503. Identity — Tests of.

Proofs of infringement consist in a comparison of the machine made by respondents with the mechanism described in the patent, and in the testimony of scientific experts. — Agawam *v.* Jordan, 74 U. S. 583; 19 L. Ed. 177.

To infringe a patent it is not necessary that the thing patented should be adopted in every particular. If the patent is adopted substantially by the defendants they are guilty of infringement. — Sewall *v.* Jones, 91 U. S. 171; 23 L. Ed. 275.

Root *v.* Ball, 4 McLean, 177; Alden *v.* Dewey, 1 Story, 336; Howe *v.* Abbott, 2 Story, 190; Parker *v.* Haworth, 4 McLean, 370.

It is not only necessary to an infringement that the arrangement which infringes should perform the same service or produce the same effect but it must be done in substantially the same way. — Werner *v.* King, 96 U. S. 218; 24 L. Ed. 613.

Burr *v.* Duryee, 1 Wall. 531.

To constitute identity of invention, and therefore, infringement, not only must the result attained be the same, but in case the means used for its attainment is a combination of known elements, the elements combined in both cases must be the same, and combined in the same way, so that each element shall perform the same function, provided however, that the differences alleged are not merely colorable, according to the rule forbidding the use of known equivalents. — Electric *v.* Hall, 114 U. S. 87; 29 L. Ed. 96; 5 S. Ct. 1069.

The jury will not consider any former device to be an anticipation unless they believe such former device developed the same mode of operation, as the device described in plaintiff's patent. — Haines *v.* McLaughlin, 135 U. S. 584; 22 L. Ed. 241; 10 S. Ct. 876.

The identity or diversity in inherent quality of two devices or manufactures will be considered in determining identity or diversity of invention. — Dobson *v.* Cubley, 149 U. S. 117; 37 L. Ed. 671; 13 S. Ct. 796.

We have repeatedly held that a charge of infringement is sometimes made out though the letter of the claims be avoided. The converse is equally true. The patentee may bring the defendant within the letter of his claims, but if the latter has so far changed the principle of the device that the claims of the patent, literally construed, have ceased to represent his actual invention, he is as little subject to be adjudged an infringer as one who has violated the letter of a statute has to be convicted, when he has done nothing to conflict with its spirit and intent. — Westinghouse *v.* Boyden, 170 U. S. 537; 42 L. Ed. 1136; 18 S. Ct. 707.

Machine Co. *v.* Murphy, 97 U. S. 120; Ives *v.* Hamilton, 92 U. S. 431; Morey *v.* Lockwood, 8 Wall. 230; Elizabeth *v.* Pavement Co. 97 U. S. 137; Sessions *v.* Romadka, 145 U. S. 29; Hoyt *v.* Horne. 145 U. S. 302; Burr *v.* Duryee, 1 Wall. 531.

The plaintiff's cutting edge and the defendant's cutting edge perform the same function in substantially the same way and accomplishes the same result. Therefore, in the sense of the patent law, they are the same thing. — Sayre *v.* Scott, 55 Fed. 971; 5 C. C. A. 366.

Machine Co. *v.* Murphy, 97 U. S. 120.

The appellant's machine is not, it is true, in every detail identical with that of the patent, but in all material respects it is the same. In substantially the same way, and by substantially the same means, it accomplished the same end. That it constitutes infringement we have no doubt. — Scott *v.* Hoe, 70 Fed. 781; 17 C. C. A. 410.

It is more important to observe what are the features of essential identity between devices than to descant upon those which are merely accidental, and might be substituted one for another, or entirely removed without disturbing the relation of parts or the principle of construction or operation. — Ferguson *v.* Roos, 71 Fed. 416; 18 C. C. A. 162.

Temple *v.* Goss, 58 Fed. 196; De La Vergne *v.* Brewing Co. 66 Fed. 765.

Section 4888 requires that an application for a patent (not the claim) shall contain a written description of the supposed invention, and of the manner of constructing and using it, "in such full, clear, concise and exact terms as to enable any person skilled in the art . . . to make and use the same;" and it follows that, in determining whether the invention described in one patent differs from that described in another, evidence may be heard, — and, in a difficult case, manifestly ought to be heard — concerning the construction and actual operation of each. — Thomson-Houston *v.* Western, 72 Fed. 530; 19 C. C. A. 1.

It may be conceded, as asserted that the differences of operation could be brought about by mechanical changes so minute that the most expert telephonist in the world, taking an instrument at random out of the line could not tell by mere inspection whether it would be a Reis or a Blake in operation or result; but a mere hearing would be enough. By way of further illustration, it is said that "there is a cabinet in the Agassiz Museum at Cambridge, containing a row of mounted skeletons, beginning at one end with a monkey and ending at the other with a Caucasian. The difference between the extremes is wide enough, but the two half-way chaps look like brothers." But they are not brothers. By neither man nor monkey has a live one of

either kind ever been mistaken for the other, and in skeleton, with all the zeal of the Darwinians to find the missing link, they remain, to the experts, easily distinguishable, and can only be said to resemble. In the light of present knowledge, the Caucasian, as an invention, is not anticipated by the Simian. — Thomson-Houston *v.* Western, 72 Fed. 530; 19 C. C. A. 1.

Each element being one of the operative means, identity depends not merely upon the function performed, but upon the manner in which it is performed. — Imperial *v.* Crown, 139 Fed. 312; 71 C. C. A. 442.

§ 504. Identity — Miscellaneous Rules.

It must be remembered it is an absolutely essential ingredient of a double use that the alleged infringing device or mechanism must be identical with the patented invention. — Duff. Mfg. Co. *v.* Forgie, 59 Fed. 772; 8 C. C. A. 261.

It is clear that the patent as granted is for a mechanism only, and while, under a liberal application of the doctrine of equivalents, "if the device is appropriated in its essential features it will be an infringement, notwithstanding some change in the location and relation of parts," even though a doubtful function of little comparative worth be eliminated (Western Elec. *v.* Sperry, 58 Fed. 186) yet the proposition enunciated in Temple *v.* Goss, 58 Fed. 196, is not inapplicable, namely:

"That when a device designed merely for the improvement of a well advanced art is described as having particular features of construction, which are adapted to accomplish specific results or modes of operation, and the claim of the patent is for that device, the features so described are covered by the claim, and may not be rejected, or treated as of secondary importance, in order to extend the patent over other forms or features not described." — Brush *v.* Western, 76 Fed. 761; 22 C. C. A. 543.

§ 505. Importation and Exportation.

A person residing in the U. S. cannot purchase in another country articles patented there, from a person authorized to sell them, and import them to and sell them in the U. S. without the license or consent of the owners of the U. S. patent. — Boesch *v.* Graff, 133 U. S. 697; 33 L. Ed. 787; 10 S. Ct. 378.

Wilson *v.* Rousseau, 45 U. S. 646; Bloomer *v.* McQueewan, 55 U. S. 539; Adams *v.* Burks, 84 U. S. 453.

A purchaser in a foreign country of an article patented in that country and also in the United States, from the owner of each patent, or from a licensee under each patent, who purchases without any restrictions upon the extent of his use or power of sale, acquires an unrestricted ownership in the article, and can use or sell it in this country. — Dickerson *v.* Matheson, 57 Fed. 524; 6 C. C. A. 466.

Bloomer *v.* Millinger, 1 Wall. 340; Mitchell *v.* Hawley, 16 Wall. 544; Paper Bag cases, 105 U. S. 770; Holliday *v.* Mattheson, 24 Fed. 185.

A purchaser in a foreign country of an article patented in that country and also in the United States, from a licensee under the foreign patent only, does not give the purchaser the right to import the article into, and sell it in, the United States, without the consent or license of the owner of the United States patent. — Dickerson *v.* Matheson, 57 Fed. 524; 6 C. C. A. 466.

Boesch *v.* Graff, 133 U. S. 697.

The cases of Adams *v.* Burke, 17 Wall. 453; Hobbie *v.* Jennison, 149 U. S. 355; and Keeler *v.* Folding Bed Co., 157 U. S. in which it was held that one who purchases patented articles of a territorial assignee within the district of the United States assigned to him, may sell them again in the territory owned by another, do not rule the case in hand. They rest upon the principle that one who buys the patented article of a party who is legally empowered to sell it under the patent has once paid tribute to the monopoly, and has thereby acquired the right to use and sell the article he buys elsewhere within the United States. But one who purchases in a foreign country, of others than the owners of the United States patent or their vendees pays nothing, either directly or indirectly to the owners of the patent, and therefore he acquires no right to make, use, or vend the article which he buys within the territorial limits of their monopoly. — Dickerson *v.* Tinling, 84 Fed. 192; 28 C. C. A. 139.

The right to sell the patented article in the United States is not governed by the laws of Germany or of England, but by the laws of this nation; and under those laws and the patent before us Bayer & Co. has the "exclusive right to make, use and vend" phenacetine in the United States. Thus, in Boesch *v.* Graff, 133 U. S. 697, a case in which the defendant had purchased in Germany, from one Hecht, who had the legal right to sell them there, certain burners, which had been patented in both Germany and the United States, Chief Justice Fuller said:

"The right which Hecht had to make and sell the burners in Germany was allowed him under the laws of that country, and purchasers from him could not be thereby authorized to sell the articles in the United States, in defiance of the rights of the patentees under a United States patent."

Nor does one who buys of the owner of the patent in a foreign country under restriction free the article from the rule. — Dickerson *v.* Tinling, 84 U. S. 192; 28 C. C. A. 139.

Holliday *v.* Mattheson, 24 Fed. 185; Dickerson *v.* Matheson, 57 Fed. 524; Dickerson *v.* Matheson, 50 Fed. 73; Dickerson *v.* Matheson, 47 Fed. 319.

The complainant was the owner of the patent on phenacetine. A quantity of the drug was smuggled, confiscated by the government, and sold to defendant who undertook to sell the same. Complainant sued for infringement. *Held:* the defendant's main contention appears to be that, by passing through the hands of the federal government, the infringing phenacetine has been in some way freed from the operation of the latter's patent; that the rights of the patentee, so far as they relate to this particular phenacetine, have been abrogated by the action of the acting officers. This proposition is wholly without support in any case cited in the brief. — Dickerson *v.* Sheldon, 98 Fed. 621; 39 C. C. A. 191.

Belknap *v.* Schild, 161 U. S. 15; James *v.* Campbell, 104 U. S. 358.

The defendant bought a patented article smuggled in and condemned by the government. On suit for infringement, *Held:* The defendant contends that, by the condemnation proceedings, the statutory notice having been given, the absolute title to the property sold passed to the purchaser, freed from any lien, interest, incumbrance, or reservation. This is correct as to property sold. All persons having title to it, or lien upon it, or interest in it are cut off. But the owner of the patent is in none of these categories. He has no title to, or lien on, or legal or equitable interest in, the infringing property. "The right of property in the physical substance, which is the fruit of the discovery, is altogether distinct from the right in the discovery itself." "Title in the thing manufactured does not give the right to use the patented invention. No more does the patent right in the inven-

tion give title in the thing made in violation of the patent." — Dickerson *v.* Sheldon, 98 Fed. 621; 39 C. C. A. 191.

Paterson *v.* Kentucky, 97 U. S. 506; Belknap *v.* Schild, 161 U. S. 24.

While it is true that the monopoly of the plaintiff's patents did not extend beyond the limits of the United States, yet it would be no defense to say that the patented article had been made in the United States only for the purpose of being sold and used in a country to which the protection of the laws of the United States did not extend. The patentee is entitled to monopolize the making of his device in the United States as well as a monopoly of there selling or using it. — Bullock *v.* Westinghouse, 129 Fed. 105; 63 C. C. A. 607.

Dorsey *v.* Bradley, 12 Blatchf. 202; Ketchum *v.* Johnson, 8 Fed. 586; Adriance *v.* McCormick, 55 Fed. 288; Gould *v.* Sessions, 67 Fed. 163.

The burden of proof was upon the complainant to show that the products imported by defendants were derived from the sources named in the patent after disclaimer. The testimony of the experts for complainant fails to establish this fact, and it is therefore insufficient. — Societe *v.* Lueders, 142 Fed. 753; 74 C. C. A. 15.

§ 506. Improvement — By an Improvement.

The patentee of an original invention cannot use a patented improvement, nor can the patentee of an improvement use the original patented machine, the one without the consent of the other. — Evans *v* Eaton, 7 Wheat. 356; 5 L. Ed. 472.

The prior patentee cannot use an improvement without the consent of the improver, and the latter cannot use the original invention without the consent of the former. — Smith *v.* Nichols, 88 U. S. 112; 22 L. Ed. 566.

Where an original machine and an improvement upon it are both patented, neither patentee can use what does not belong to him. — Robertson *v.* Blake, 94 U. S. 728; 24 L. Ed. 245.

An improvement, although it may be a proper subject for a patent, in use may include the prior invention and therefore infringe it. — Morley *v.* Lancaster, 129 U. S. 263; 32 L. Ed. 715; 9 S. Ct. 299.

A machine operating on the same principle and performing the same functions by analogous means or equivalent combinations, even though the infringing machine may be an improvement of the original, and patentable as such, is an infringement. — Norton *v.* Jensen, 49 Fed. 859; 1 C. C. A. 452.

McCormick *v.* Talcott, 20 How. 405; Wells *v.* Gill, 1 Ban. & A. 77; Kendrick *v.* Emmons, 2 Ban. & A. 208; Turrell *v.* Spaeth, 3 Ban. & A. 458; Colt *v.* Arms Co. 1 Fish. P. C. 108; Winans *v.* Railroad, 4 Fish. P. C. 2; Whipple *v.* Mfg. Co. 4 Fish. P. C. 29; Fruit Co. *v.* Curran, 8 Fed. 150.

It may be that these alleged infringing machines are an improvement upon the invention covered by the patent in suit, but they still have all the essential elements of the best form of that invention, and therefore must be held to infringe it. — Woodward *v.* Boston, 60 Fed. 283; 8 C. C. A. 622.

Since the case of O'Reilly *v.* Morse, 15 How. 61, it has been well settled that a patent may issue for an improvement on an earlier invention either to the original inventor or to a stranger. Of course, no one can use the improvement without right or license to use the fundamental invention; but, on the other hand, the right to use the original invention does not confer the right

to use the improvement without license from the tributary inventor. — Thomson-Houston *v.* Ohio, 80 Fed. 712; 26 C. C. A. 107.

Even if it required the inventive faculty to make the change, it would nevertheless be an invention tributary to the first, and therefore an infringement. — Penfield *v.* Chambers, 92 Fed. 630; 34 C. C. A. 579.

It is true, ordinarily, that the mere fact that a machine effects better results than the patented device, or that a patented device is applied to purposes not foreseen by the patentee, does not relieve against the charge of infringement. — Davey *v.* Prouty Co. 107 Fed. 505; 46 C. C. A. 439.
U. S. *v.* Berdan, 156 U. S. 552.

In view of the facts that the respondents' device thus accomplishes a substantially different result from the complainant's, and has a substantial function which the latter does not possess, and for which it was not intended, and that, also, the latter can do the fine work for which the former was not adapted, the remark made in the opinion of Judge Hawley, given in behalf of the Circuit Court of Appeals for the Ninth Circuit, in Norton *v.* Jensen, 49 Fed. 859, seems pertinent: "It would be a perversion of the law to hold a machine which can do certain kinds of work to be an infringement on a patent for a different machine, which cannot do the same work." — Davey *v.* Prouty Co. 107 Fed. 505; 46 C. C. A. 439.

There are changes here and there — oftentimes for its betterment — of the details, but they do not make the appellee's machine, any the less, the direct offspring of Kitselman's thought, and its mechanical embodiment. — Kitselman *v.* Kokomo, 108 Fed. 632; 47 C. C. A. 538.

The fact that defendants' new structure is patented does not relieve them from infringement. — Dowagiac *v.* Minnesota, 118 Fed. 136; 55 C. C. A. 86.
Clough *v.* Barker, 106 U. S. 166; Consolidated *v.* Crosby, 113 U. S. 157.

Conceding the validity of his patent for present purposes, it raises no presumption against the earlier patent, and cannot furnish the defendant a license to use with impunity any combination described in the prior patent. — Ryder *v.* Schlichter, 126 Fed. 487; 61 C. C. A. 469.

It would be none the less an infringement, if the defendant, by additional efforts, had produced a better barrel, provided that in the process of making the improved barrel the defendant used any part of that device or method for which East's patent was granted. — Farmers' *v.* Spruks, 127 Fed. 691; 62 C. C. A. 447.

Where a complainant patentee has accomplished a new result by a new means, a defendant cannot escape the charge of infringement merely by showing a later patent. The field covered by the primary patent is not free for defendant's plowing without the owner's consent. True, the defendant may have devised an independent method of arriving at the same result; but it is also true that he may merely have added supplementary devices, or improved some details of the primary patent. There is no presumption either way. The facts are to be taken from the proofs. — Ries *v.* Barth, 136 Fed. 850; 69 C. C. A. 528.

Consolidated *v.* Crosby, 113 U. S. 157; Morley *v.* Lancaster, 129 U. S. 263; National *v.* Interchangeable, 106 Fed. 693; Crown *v.* Aluminum, 108 Fed. 845; Lamson *v.* Hillman, 123 Fed. 416; Western *v.* American, 131 Fed. 78.

This is a mere addition to the patented machine, supplementing the function of one element, without changing the co-operative function of the wheels in their combination. So, assuming that it is an important improvement, and patentable as an improvement, its association with the means of the prior patent is unauthorized without license from such patentee. — Columbia *v.* Kokomo, 143 Fed. 116; 74 C. C. A. 310.

Cochrane *v.* Deener, 94 U. S. 780; Cantrell *v.* Wallick, 117 U. S. 689; Hoyt *v.* Horne, 145 U. S. 302; Walker on Pat. sec. 347.

That an infringer may not justify himself on the ground that his act is in accordance with the claims of a subsequent patent, especially where such patent was declared, in the Patent Office proceedings, to be an improvement upon the patent in suit, see Columbia *v.* Kokomo, 143 Fed. 116; 74 C. C. A. 310.

Possibly the improvement may be patentable, but that circumstance will not relieve it from infringement, if it contains the specific device which Benjamin made and patented. — Benjamin *v.* Dale, 158 Fed. 617; 85 C. C. A. 439.

Thomson-Houston *v.* Ohio, 130 Fed. 549; Perkins *v.* Buchanan, 129 Fed. 135.

These modifications and additions may be improvements, meritorious enough to secure a patent for them, but they will not negative infringement if a defendant uses the broad invention which a prior patentee has described and covered in his claims. — International *v.* Bundy, 159 Fed. 464; 86 C. C. A. 494.

Electric *v.* Pittsburgh, 124 Fed. 933.

§ 507. Improvement — Of an Improvement.

We think with the court below, that the patentee, if entitled to anything, is only entitled to the precise device which he has described and claimed in his patent; and as the defendants use a different device, they are not guilty of infringement. — Bridge *v.* Excelsior, 105 U. S. 618; 26 L. Ed. 1190.

The defendant adopts another form. Under such circumstances the Todd patent cannot be extended so as to embrace the defendant's form. The latter is not a mere colorable departure from the form of Todd, but is a substantial departure. — Duff *v.* Sterling, 107 U. S. 636; 27 L. Ed. 517; 2 S. Ct. 487.

Merrill *v.* Yeomans, 94 U. S. 568.

As the claim comes down to the merest mechanical details, a change in such details is not a colorable departure, but a substantial one, so far as this patent is concerned. — B. & S. Fastener *v.* B. G. Fastener, 58 Fed. 818; 7 C. C. A. 498.

Duff *v.* Pump Co. 107 U. S. 636.

One who invents and secures a patent for a machine or combination which first performs a useful function is protected thereby against all machines and combinations which perform the same function by equivalent mechanical devices; but one who merely makes and secures a patent for a slight improvement on a device or combination, is protected against those only who use the very improvement that he describes and claims, or mere colorable evasions of it. "If one inventor precedes all the rest, and strikes out something which includes and underlies all that they produce, he acquires a monopoly, and subjects them to tribute. But if the advance toward the thing desired is gradual, and proceeds step by step, so that no one can claim

the complete whole, then each is entitled only to the specific form of device which he produces, and every other inventor is entitled to his own specific form, so long as it differs from those of his competitors, and does not include theirs." — Adams Elec. Ry. *v.* Lindell, 77 Fed. 432; 23 C. C. A. 223.

Railway *v.* Sayles, 97 U. S. 554; McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Mfg. Co. 61 Fed. 980; Griswold *v.* Harker, 62 Fed. 389.

If the inventor had been the first to perform the function which his machine did perform, he would be entitled to a liberal construction and a reasonable range of equivalents; but the improvement being narrow and specific infringement, to be established, must lie within his narrow and specific field, see — MacColl *v.* Crompton, 95 Fed. 987; 37 C. C. A. 351.

Where the advance towards the desideratum is gradual, and several inventors form different combinations which accomplish the desired result with varying degrees of operative success, each is entitled to his own combination so long as it differs from those of his competitors and does not include theirs. — National *v.* Interchangeable, 106 Fed. 693; 15 C. C. A. 544.

Railway Co. *v.* Sayles, 97 U. S. 554; McCormick *v.* Talcott, 20 How. 402; Stirrat *v.* Mfg. Co., 61 Fed. 980; Griswold *v.* Harker, 62 Fed. 389; Adams *v.* Lindell, 77 Fed. 432.

Comparing the two devices, not with respect to the point of exit, but in respect to the means by which the exit is secured, it is clear that the defendant's organization involves an original conception, is meritorious and ingenious, and not an infringement. — U. S. Envelope *v.* Sherman, 122 Fed. 464; 58 C. C. A. 624.

In order to establish the infringement of a mere improvement in a machine of former devices already in use for accomplishing a similar purpose, the means must be substantially the same, operating in the same way, and accomplishing the same result. — Rich *v.* Baldwin, 133 Fed. 920; 66 C. C. A. 464.

Ross-Moyer *v.* Randall, 104 Fed. 355.

The patentee of a mere improvement cannot treat another as an infringer, who has improved the original machine by use of a different form or combination performing the same function. Where the result is old, and the novelty consists only of improvements in a known machine for producing a known result, the patentee must be tied down strictly to the mode which he has described for effecting such improvements. — Greene *v.* Buckley, 135 Fed. 520; 68 C. C. A. 70.

McCormick *v.* Talcott, 20 How. 402; Proctor *v.* Bennis, 36 Ch. Div. 740.

Where neither a new result nor a new principle of operation in producing the result has been achieved, and the patentee has merely improved upon the old way of accomplishing the old result, the presumption is that his patent is not infringed by a later patent for improvements upon the same old way of accomplishing the same old result. That is, presumably, each is an independent improver in a field that was as open to one as the other — presumably the thought of the one has not overlapped the thought of the other. But the presumption is not conclusive, and, even in cases of the narrowest patents, it is always open for the complainant to show that the defendant has appropriated his property. — Ries *v.* Barth, 136 Fed. 850; 69 C. C. A. 528.

The differences between the complainant's patent and the prior art, we think, are no greater than are the differences between the patents of the

complainant and defendants. To these two patents we think is properly applicable under the proofs the rule in McCormick *v.* Talcott, 20 How. 402. — Standard *v.* Ramsay, 143 Fed. 972; 75 C. C. A. 158.

It is obvious that since the location of the valve in a distinct recess or chamber alone prevented the Low patent from completely anticipating complainant's, that any device in which the valve is located in a distinct recess or chamber, as in Low, cannot infringe the complainant's patent. — Chicago *v.* Cleveland, 159 Fed. 143; 86 C. C. A. 51.

§ 508. Intent.

The proposition that the application of this patent depend upon the individual intent of the operator, overlooks the essential nature of a process patent. The directions and specifications of such a patent are addressed to those engaged and skilled in the art. It professes to disclose a method of procedure, not the particular instrumentality employed. — Carnegie *v.* Cambria, 185 U. S. 403; 46 L. Ed. 968; 22 S. Ct. 698.

But the owner of a patent is entitled to protection against the repetition of accidental infringements. — Thompson *v.* Bushnell, 96 Fed. 238; 37 C. C. A. 456.

If the thing done is wrongful, the lack of intention will not excuse. — Globe-Wernicke *v.* Macy, 119 Fed. 696; 56 C. C. A. 304.

2 Greenl. Ev. 270; Chatfield *v.* Wilson, 28 Vt. 49; Heath *v.* Unwin, 15 Sim. 552; Stead *v.* Anderson, 4 C. B. 806; Parker *v.* Hulme, 1 Fish. P. C. 44.

The position of both the defendant and his expert seems to be that though the defendant infringes, the infringement is unintentional. This is enough; it is not an excuse that it is less effective than complainant's machine. — Ciniotti *v.* Bowsky, 143 Fed. 508; 74 C. C. A. 617.

§ 509. License — Implied.

After a machine has been constructed by any person with the inventor's knowledge and consent before the application for a patent, every other person who either sells or uses that machine is within the protection of the section (4899) and needs no new consent or permission of the inventor. — Wade *v.* Metcalf, 129 U. S. 202; 39 L. Ed. 661; 9 S. Ct. 271.

§ 510. License — By Licensee.

The defendants first took a license from the patentee, and under it and under his directions erected substantially the same apparatus now used. Receiving what they regarded as additional light, they refused to continue payment of royalty, and put the complainant to his legal remedy. — Tilghman *v.* Proctor, 102 U. S. 707; 26 L. Ed. 279.

If the licensee's rights have been infringed by the owner, and third persons confederating with the owner, there is no reason why all the infringers should not be joined as defendants. — Waterman *v.* Shipman, 55 Fed. 982; 5 C. C. A. 371.

Perry *v.* Littlefield, 17 Blatchf. 272.

The defendant, while licensee, made a large quantity of electrical fixtures within and under the terms of the license. He terminated the license of his own accord, and thereafter installed the fixtures. *Held:* It was not the intention of the agreement that goods could be accumulated by the licensee

during the continuance of the license and, although not ordered before its voluntary cancellation, could be subsequently sold in competition with other licensees, and such sales made after cancellation were unauthorized. — Pelzer *v.* Binghamton, 95 Fed. 823; 37 C. C. A. 288.

The contract licensed defendant to use "lead presses containing any one or more of the devices described and claimed in said letters patent." It is argued that thereby defendant became liable for the use of any part of the patented press, even though such part was only a single element of a patented combination. This contention is without merit. — Western *v.* Robertson, 142 Fed. 471; 73 C. C. A. 587.

A licensee under the first patent who uses the mechanism therein secured cannot be held an infringer under the second patent. In order to hold him it is necessary to show that he uses the devices of the first patent plus the improvements of the second patent; not any and all improvements calculated to produce similar results, but the precise improvements described and claimed. — Wagner *v.* Wycoff, 151 Fed. 585; 81 C. C. A. 129.

(The licensee refused to pay license fees and threatened to reduce price, and refused to mark articles with licensed patent.)

In addition to an accounting an injunction is prayed to restrain appellee from further making, using, or selling stackers in violation of appellant's rights as stated, or except in strict compliance with the terms of the license. This is not a bill for the specific performance of a contract. The court is not asked to compel appellee to make and sell stackers under the license, and to see to it that appellee maintains the price, puts on the patent marks, and accurately reports its sales. So far as this bill is concerned, appellee may quit the stacker business any minute he sees fit. What is sought is an injunction against appellee's unlawful invasion of appellant's lawful patent monopoly. If appellee had not invaded, or if the monopoly is unlawful, appellant fails. If appellant had chosen to accept appellee's repudiation of the license, a bill to exclude appellee utterly from the domain of the patents would have lain. By declining to recognize the fact or the right of repudiation, appellant did not estop itself from asking to exclude appellee from that part of the domain which had not been granted, namely, the control of prices and methods. Stripped of all averments in relation to appellant's business built up on licenses, the bill states a good cause of action for infringement of the patents. These averments, as appellant rightly claims, show an aggravation of the injury resulting from the infringement, and constitute, therefore, an additional appeal for injunctive relief. That the bill properly invokes the aid of equity we have no doubt. — Indiana *v.* Case, 154 Fed. 365; 83 C. C. A. 343.

Eureka *v.* Bailey, 11 Wall. 488; Kinsman *v.* Parkhurst, 18 How. 289; Hardin *v.* Boyd, 113 U. S. 763; West. Un. *v.* Un. Pacific, 3 Fed. 423; McKay *v.* Smith, 29 Fed. 295; Hat Co. *v.* Porter, 34 Fed. 745; Ball *v.* Ball, 36 Fed. 309; Am. *v.* Crossman, 57 Fed. 1021; Am. *v.* Crossman, 61 Fed. 888; Heaton *v.* Eureka, 77 Fed. 294; Victor *v.* Fair, 123 Fed. 424; Rupp *v.* Elliott, 131 Fed. 730.

§ 511. License — Patentee.

That the inventor or licensor may infringe the rights of his grantee and be sued therefor in infringement. — Littlefield *v.* Perry, 88 U. S. 205; 22 L. Ed. 577.

There is no reason or authority for the proposition that a licensee who has the exclusive right to manufacture and sell a patented article cannot maintain a suit in equity against the owner of a patent; if the latter is guilty of an

infringement by making or selling himself, to redress the wrong occasioned thereby, or that such a suit does not arise under the patent laws of the United States. — Waterman *v.* Shipman, 55 Fed. 982; 5 C. C. A. 371.

Littlefield *v* Perry, 21 Wall. 205.

§ 512. License — Territorial.

The sale of a patented article by an assignee within his territory carries the right to use it everywhere, notwithstanding the knowledge of both parties that a use outside the territory is intended. — Hobbie *v.* Jennison, 149 U. S. 355; 37 L. Ed. 766; 13 S. Ct. 879.

Adams *v.* Burks, 84 U. S. 453; Birdsall *v.* Shaliol, 112 U. S. 485; Wade *v.* Metcalf, 129 U. S. 202; Boesch *v.* Graff, 133 U. S. 697.

§ 513. License — Miscellaneous.

The purchase of a device and the license to use it does not extend to and operate as a license to construct thereon another and infringing device. — Vermont *v.* Gibson, 56 Fed. 143; 5 C. C. A. 451.

Infringement by the defendant was not denied, and the validity of the patent could not be disputed by one who undertook to justify his use of it under a license. — Platt *v.* Fire Extinguisher, 59 Fed. 897; 8 C. C. A. 357.

Kinsman *v.* Parkhurst, 18 How. 289; Brown *v.* Lapham, 27 Fed. 77.

An unconditional or unrestricted sale by the patentee, or by a licensee authorized to make such sale, of an article embodying the patented invention or discovery, passes the article without the limits of the monopoly, and authorizes the buyer to use or sell without restriction; but to the extent that the sale is subject to any restriction upon the use or future sale the article has not been released from the monopoly, but is within its limits, and, as against all who have notice of the restriction, it is subject to the control of whoever retains the monopoly. This results from the fact that the monopoly is a substantial property right conferred by law as an inducement or stimulus to useful invention or discovery, and that it rests with the owner to say what part of the property he will reserve to himself and what part he will transfer to others, and upon what terms he will make the transfer. — National *v.* Schlegel, 128 Fed. 733; 64 C. C. A. 594.

Bement *v.* National, 186 U. S. 70; Victor *v.* The Fair, 123 Fed. 424; Dickerson *v.* Tinling, 84 Fed. 192; Heaton *v.* Eureka, 77 Fed. 288; Cortelyou *v.* Lowe, 111 Fed. 1005; Edison *v.* Kaufman, 105 Fed. 960; Edison *v.* Pike, 116 Fed. 863; Fowle *v.* Park, 131 U. S. 88; Garst *v.* Harris, 177 Mass. 72.

Building additional machines without consent of licensor. For a most remarkable holding in the Ninth Circuit, Ross, J., see — Plotts *v.* Central, 143 Fed. 901; 75 C. C. A. 7.

It is familiar law that articles manufactured under the term of the patent are taken out of the limits of the monopoly and become part of the common property of the country. When they are sold by the patentee or his licensee, the royalty having been previously paid or secured, the patentee, having once received his royalty, cannot treat the seller or user as an infringer. — Goshen *v.* Single Tube, 166 Fed. 431; C. C. A.

Morgan *v.* Albany, 152 U. S. 425; National *v.* Schlegel, 128 Fed. 733.

§ 514. Machine.

A machine made up and complete before application for patent is not an infringement. (Which statement is to be qualified, I think by the elements

of independent invention and good faith.) — Troy *v.* Odiorne, 58 U. S. 73; 15 L. Ed. 37.

§ 515. Machine and Manufacture.

Right to use machine carries with it the right to manufacture. — Morgan *v.* Albany, 152 U. S. 425; 38 L. Ed. 500; 14 S. Ct. 627.

Title in the thing manufactured does not give the right to use the patented invention; no more does the patent right in the invention give title in the thing made in violation of the patent. — Belknap *v.* Schild, 161 U. S. 10; 16 L. Ed 599; 16 S. Ct. 443.

If the apparatus used by the appellant is so far different from that of the appellee that it does not infringe, the process, which, in mechanics, is merely the exercise of the functions of the machine or apparatus, cannot be an infringement of any right secured by the patent. — American *v.* Cleveland, 158 Fed. 978; 86 C. C. A. 182.

§ 516. Notice.

In absence of marking articles "patented," notice is necessary. — Dunlap *v.* Schofield, 152 U. S. 244; 38 L. Ed. 426; 14 S. Ct. 576.

It is impossible to read the communications warning the complainant's customers against selling its harrows, with which the defendant seems to have flooded the country, without being led to believe that they were inspired by a purpose to intimidate the complainant's customers, and coerce the complainant, by injuring its business, into becoming a licensee of the defendant. In view of its failure to bring an infringement action, under circumstances which made an action practically compulsory, the defendant cannot shelter itself behind the theory that its circulars and letters were merely legitimate notices of its rights. We are satisfied that they were sent, not for the purpose of self-protection, but in execution of the defendant's threat to stop the complainant from building harrows by other means than legal remedies. — Adriance *v.* National, 121 Fed. 827; 58 C. C. A. 163.

Undoubtedly the owner of a patent is acting within his rights in notifying infringers of his claims, and threatening them with litigation if they continue to disregard them; nor does he transcend his rights when, the infringer being a manufacturer, he sends such notices to the manufacturer's customers, if he does so in good faith, believing his claims to be valid, and in an honest effort to protect them from invasion. — Adriance *v.* National, 121 Fed. 827; 58 C. C. A. 163.

§ 517. Prior Patent.

The question of infringement or non-infringement must be determined by the limitations placed upon this patent by the state of the art when it was issued. — Griswold *v.* Harker, 62 Fed. 389; 10 C. C. A. 435.

McCormick *v.* Talcott, 20 How. 402.

The question of infringement or non-infringement in this case, as in every case, must be determined under this rule by the limitations placed upon the patent by the state of the art when it was issued, and by the specifications and claims of the inventor. — Murphy *v.* Excelsior, 76 Fed. 965; 22 C. C. A. 658.

§ 518. Process — Additions.

The defendant does not use the process any the less because he uses something in addition to the process. — Clerk *v.* Tannage, 84 Fed. 643; 28 C. C. A. 501.

Quotg. Lelance *v.* Habermann, 53 Fed. 380.

Tilghman *v.* Proctor, 102 U. S. 730.

The addition of a step to a process which does not change the result does not avoid infringement. — Ford Co. *v.* Tannage, 84 Fed. 644; 28 C. C. A. 503.

§ 519. Process — Tests of.

The patentee does not claim to be the inventor of the constituents. The exclusive use of them singly is not secured to him. What is secured is their use when arranged in the process. Unless one of them is employed in making up the process, as an element of it, the patentee cannot prevent others from using it. As well might the patentee of a machine, every part of which is an old and known device, appropriate the exclusive use of each device, though employed singly, and not combined with others as a machine. — Mowry *v.* Whitney, 81 U. S. 620; 20 L. Ed. 860.

Unless it was shown that the process was followed to produce the defendant's article, or unless it is shown that the article could not be produced by any other process, the defendant's article cannot be identified as the product of the process. — Cochrane *v.* Badische, 111 U. S. 293; 28 L. Ed. 433; 4 S. Ct. 455.

It must be borne in mind that, in the practical determination of questions of alleged infringement, the problem is very different when we are dealing with a chemical compound than it is when we are dealing with a machine. Such observation as the eye can give to the machine at rest and in action, illuminated by a comparison of the co-ordination of its parts with that of like parts in other machines, will be ordinarily sufficient to determine its classification. Far different is it with a chemical compound. No mere observation by the eye, supplemented even by the taste and touch, can go very far towards a solution of the problem. The same mysterious forces through whose action and reaction the compound was produced must be availed of to disintegrate and disrupt, before there can be any assurance of what it is we have before us. Hence it is that so-called " tests " are devised by those skilled in the art and science of chemistry, which, in their opinion, as experts, will reveal the secrets of the composition sufficiently to make the answer to the question positive enough to support the judgement of a court.

An inventor takes certain starting materials, and subjects them to a process he has devised. The result is a product. If he sufficiently describes the starting materials and the process in his patent, he may claim the product, being new; but, if he simply defines what he claims as the " product of his process," he might find it an extremely difficult matter to prove infringement. " Every patent for a product or composition of matter must identify it so that it can be recognized, aside from the description of the process for making it, or else nothing can be held to infringe the patent which is not made by that process," Cochrane *v.* Badische, 111 U. S. 293. Now, there are many tests that may be applied to two bodies which are being compared in order to determine whether they are or are not identical. The number of these tests may be multiplied indefinitely, for the skill, the experience, the scientific ingenuity of the chemist, will ever devise new ones in the future, as they have

the old ones in the past. Some of these tests will be of great significance; some, almost crucial; others will be of but minor importance. Their relative value, no doubt, may change as science goes sweeping on from point to point; but it must be sound law, as it is reasonable common sense, to hold that the tests of prime importance in a suit for infringement are those which the patent itself prescribes. The inventor certainly may be assumed to know what it is that he has invented. If any one is able to describe the product of his inventive skill, it is himself. He surely knows the earmarks of the thing he seeks to patent, and when, out of the multitudinous qualities which his product may exhibit under varying conditions and in different relations, he has selected and set forth in his patent a chosen few, surely these should be accepted as the distinguishing earmarks, — the characteristic stigmata of the product his patent is to cover. It may be that, after it is found that the body under investigation responds to all the tests of a patent, science may yet be able to demonstrate by other tests that, nevertheless, it is not the new product therein patented; that the patentee had selected identifying tests broader than he was entitled to, and which would cover products not within the range of his discovery. But when the body under investigation fails to respond to the specific tests the patentee has himself selected, he certainly cannot fairly insist that it is identical with his product. — Matheson *v.* Campbell, 78 Fed. 910; 24 C. C. A. 284.

Complete identity is not necessary. As was stated by Mr. Justice Curtis in Winans *v.* Denmead, 15 How. 330:

"If the machine complained of were a copy, in form, of the machine described in the specification, of course, it would be at once seen to be an infringement. It could be nothing else. It is only ingenious diversities of form and proportion, presenting the appearance of something unlike the thing patented, which give rise to questions; and the property of inventors would be valueless, if it were enough for the defendant to say: 'Your improvement consisted in a change of form; you describe and claim but one form; I have not taken that, and so have not infringed.'"

This was said in a case where the original patent was for a cylindrical ore body in a railroad car, where the structure held to infringe was hexagonal. But it is equally applicable to inventions for processes. The patentee is entitled to claim, not only that which he precisely claims, but, where he claims for a combination or process embodying the use of certain elements, his claims will include such combinations and processes as adopt substantially the same means; where the variation is only such as common intelligence in that art would suggest. Incidental appliances in operating the substantial means invented would not prevent a second patented invention from infringing upon the first. The language of some of the Bradley claims is broad enough to admit the admixture of carbon, if his invention was a primary one, and the employment of carbon was a mere auxiliary of the current in effecting the reduction, according to the doctrine of Machine Co. *v.* Lancaster, 129 U. S. 263; Proctor *v.* Bennis, 36 Ch. Div. 740; McCormick *v.* Aultman, 69 Fed. 371; and kindred cases. — Cowles *v.* Lowrey, 79 Fed. 331; 24 C. C. A. 616.

Two processes cannot be said to be substantially alike where the successive steps which they involve are different, and where, as in this instance, several of the steps which are requisite to the one are wholly omitted from the other, identity of method cannot exist. — U. S. Glass *v.* Atlas, 90 Fed. 724; 33 C. C. A. 254.

§ 520. Process — Miscellaneous.

The defendants seeing the utility of the process, and believing that they can use a method somewhat similar without infringing, put a little lime into

the mixture, and find that it helps the operation, and that they do not have to use so high a degree of heat as would otherwise be necessary. Still, the degree of heat required is very high, at least a hundred degrees above the boiling point; and a strong boiler or vessel is used in order to restrain the water from rising into steam. Can a bolder case be conceived of an attempted evasion and a real infringement of a patent? — Tilghman *v.* Proctor, 102 U. S. 707; 26 L. Ed. 279.

A process is not infringed by the use of any number of its stages less than all of them. — Goodyear *v.* Davis, 102 U. S. 222; 26 L. Ed. 149.

Where the patent is for specific process, not being generic, it must be shown that the defendants used all the different steps of that process, or there could be no infringement. — Royer *v.* Coupe, 146 U. S. 524; 36 L. Ed. 1073; 13 S. Ct. 166.

It may be, as suggested, that one person may, and in ignorance of the patented method, make use of a reservoir merely as such (the essential feature of the process) and without any design to avail himself of the patented process; but such a fact would not deprive the discoverer of the process of the protection of his patent. Such a supposed case might present a question of fact for a court or jury, and if it were made to appear that the party charged with infringement had, as in this case, changed the instrumentalities used by him after a new method had been disclosed, and particularly if he had for the first time used such a special device necessary to that process, a jury might well refuse to believe and find that the defendant was only following the old methods of procedure, and not seeking to avail himself of the plaintiff's invention. — Carnegie *v.* Cambria, 185 U. S. 403; 46 L. Ed. 968; 22 S. Ct. 698.

§ 521. Product.

A had a patent on a machine. B made a contract with C for a certain number of articles of the character made by such machine. C made the articles by A's machine. *Held:* that unless the contracts were merely colorable and evasive, B was not liable in purchasing the articles made by C upon a machine which infringed A's patent. — Keplinger *v.* De Young, 10 Wheat. 358; 6 L. Ed. 341.

If it was a patent for a process, it would not be infringed by selling the product, and no conditions should have been annexed to the exercise of the vendor's rights. The broad proposition that the vendor of a product which has been made in infringement of a patented process is an infringer, or liable to any extent through the patentee, is untenable and does not require discussion. The patentee's remedy is against the manufacturer. Welsbach *v.* Union, 101 Fed. 131; 41 C. C. A. 255.

Merrill *v.* Yeomans, 94 U. S. 518.

§ 522. Reissue.

An infringement cannot be sued for which took place prior to the granting of the reissue. — Stimpson *v.* Railroad, 4 How. 380; 11 L. Ed. 1020.

Where reissue contains claim void for expansion and also original claim the expanded claim does not invalidate the original claim. — Leggett *v.* Standard, 149 U. S. 287; 37 L. Ed. 737; 13 S. Ct. 902.

Gage *v.* Herring, 149 U. S. 640.

§ 523. Repairs — Rebuilding.

Complainant's patent covered a bale tie, consisting of a buckle and band, which they sold marked, "Licensed to use once only." Defendants bought as scrap iron the used buckles and bands, straightened and united them where the band had been cut, and sold them for use. *Held:* Infringement. — American *v.* Simmons, 106 U. S. 89; 27 L. Ed. 79; 1 S. Ct. 52.

Distinguishing Wilson *v.* Simpson, 9 How. 109.

It is not within the rule of right to make repairs to reconstruct the old device to the extent of making one substantially new. — Davis *v.* Edison, 60 Fed. 276; 8 C. C. A. 615.

Citg. and explaining Chaffee *v.* Belting Co. 22 How. 217; Adams *v.* Burks, 17 Wall. 453; Hobbie *v.* Jennison, 149 U. S. 355; Wilson *v.* Simpson, 9 How. 109; Cotton Tie *v.* Simmons, 106 U. S. 89.

The reconstruction of a destroyed or wornout combination is an infringement. — Thomson-Houston *v.* Kelsey, 75 Fed. 1005; 22 C. C. A. 1.

Disting. Wilson *v.* Simpson, 9 How. 109.

Cotton *v.* Simmons, 106 U. S. 89; Davis *v.* Edison 60 Fed. 276.

The machine referred to in the bill was entirely dismantled, except its legs, and a new machine built thereon. — Pacific *v.* Alaska, 100 Fed. 462; 40 C. C. A. 494.

When the patented machine has passed outside the monopoly by sale and purchase, the patentee has no right to impose any restrictions on its use for his own benefit. He cannot forbid the further use of the machine because it is out of repair in consequence of the wearing out or breaking of some of its parts, and so oblige the purchaser to buy a new machine. The purchased machine has become the individual property of the purchaser, and is like any other piece of property which he owns. He may sell it, or he may use it so long as its usefulness lasts, and then throw it away, or dispose of it for junk. He may prolong its life and usefulness by repairs more or less extensive, so long as its original identity is not lost. He is only prohibited from constructing a substantially new machine. He cannot, under pretext of repairs, build another machine. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

Wilson *v.* Simpson, 9 How. 13; Adams *v.* Burks, 17 Wall. 453; Chaffee *v.* Belting, 22 How. 217; Mitchell *v.* Hawley, 16 Wall. 544; Hobbie *v.* Jennison, 149 U. S. 355; Cotton-Tie *v.* Simmons, 106 U. S. 89; Aikin *v.* Print, 2 Cliff. 435; Morgan *v.* Albany, 152 U. S. 425; Gottfried *v.* Brewing, 5 B. & A. 5; Davis *v.* Edison, 60 Fed. 276.

In approaching the question of infringement by the purchaser of a patented machine (infringement by repairing), it is important to bear in mind what the patentee sold and the purchaser bought. The patentee has parted with his machine and the monopoly that goes with it, and the purchaser has bought the machine with the right to use the invention until the machine is worn out. When the machine is worn out or substantially destroyed, his right to use the patented invention ceases; and when he rebuilds his machine, and thereby makes substantially a new machine, it becomes the subject of the patentee's monopoly, the same as in the case of any other person who unlawfully makes the patented machine. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

It was not seriously contended at the argument that the repair to a single tube would not infringe the claim. It is equally clear that replacing the entire

series is an infringement. Between these two extremes lies a debatable ground, the precise limits of which cannot be determined in advance. Whether the bounds of legitimate repair have been exceeded must be determined upon the facts of each case as it is presented. The mere fact that the patentee is willing to replace the injured part and make the repair is not alone sufficient to vest in him a monopoly of this work. If the purchaser sees fit to make necessary repairs himself, or employs others for that purpose, he has a right to do so, even though it be shown that he has theretofore been guilty of infringement. The commission of an unlawful act in the past does not warrant the prohibition of lawful acts in the future. — Morrin *v.* White, 143 Fed. 519; 74 C. C. A. 466.

To return to use something injured or lost, or to substitute for something defaced or destroyed another thing substantially identical, is to repair. The right of general repairing has not been questioned; but what plaintiff in error has done is not to mend or better broken or other records, nor even to furnish new records identical with those originally offered by the Victor Company, but to place upon new disks such other sound records as are thought to command a market, and to induce users of the patented machine not to replace, but to increase their stock of recorded words and music. The right to repair is measured by the right of the owner of the patented article, and such owner, when doing what is above outlined, is no more repairing his machine than is one repairing a stereopticon by changing the pictures therein. — Leeds *v.* Victor, 154 Fed. 58; 85 C. C. A. 170.

§ 524. Repairs — What Constitute.

We admit, for such is the rule in Wilson *v.* Rousseau, 4 How. that when the material of the combination ceases to exist, in whatever way that may occur, the right to renew it depends upon the right to make the invention. If the right to make does not exist, there is no right to build the combination. But it does not follow when one of the elements of the combination has become so much worn as to be inoperative, or has broken, that the machine no longer exists for the restoration to its original use by the owner, who has bought it to use. When the wearing or injury is partial, then repair is restoration, and not reconstruction. — Wilson *v.* Simpson, 9 How. 109; 13 L. Ed. 66.

Of course, when we speak of a right to restore a part of a deficient combination, we mean the part of one entirely original, and not of any other patented thing which has been introduced into it, to aid its intended performance. Nor is it meant that the right to replace extends to everything that may be patented. Between repairing and replacing there is a difference. — Wilson *v.* Simpson, 9 How. 109; 13 L. Ed. 66.

If the patented article can be repaired by means which merely keep it up to the performance of its duty, such is permissible; but if it is so broken or worn out as to require replacement it cannot be effected by repair. — Wilson *v.* Simpson, 9 How. 109; 13 L. Ed. 66.

Complainant's patent covered a bale tie, consisting of a buckle and band, which they sold marked, "Licensed to use once only." Defendants bought as scrap iron the used buckles and bands, straightened, and riveted them together where the band had been cut, and sold them for use. *Held:* Infringement. — American *v.* Simmons, 106 U. S. 89; 27 L. Ed. 79; 1 S. Ct. 52.

Distinguishing Wilson *v.* Simpson, 9 How. 109.

Discussed with cases. — Morgan *v.* Albany, 152 U. S. 425; 38 L. Ed. 500; 14 S. Ct. 627.

The right to repair a patented device is a right which goes with the device when it is sold; but that right does not include a right to rebuild the device in the sense of making it a new device. — Davis *v.* Edison, 60 Fed. 276; 8 C. C. A. 615.

Chaffee *v.* Belting Co. 22 How. 217; Adams *v.* Burks, 17 Wall. 453; Hobbie *v.* Jennison, 149 U. S. 353; Wilson *v.* Simpson, 9 How. 109; Cotton Tie *v.* Simmons, 106 U. S. 89.

The right to replace a broken or injured part by a new one, from any person who can supply the article, should be conceded by the owners of the patent. — Thomson-Houston *v.* Kelsey, 75 Fed. 1005; 22 C. C. A. 1.

The rule is well established that one who purchases a machine or mechanical contrivance consisting of several distinct parts, which, as a whole, is covered by a patent, has the right, by virtue of his purchase from the patentee, to repair a part of the machine or device which happens to be broken through accident, or which becomes so far worn as to render the machine inoperative, provided the machine as a whole, still retains its identity, and what is done in the way of rendering it operative does not amount to reconstruction, and provided, further, that the part so replaced is not separately covered by a patent. The sale of a patented article by the patentee frees it from the grasp of the monopoly, and the purchaser may thereafter exercise the same dominion over it which he exercises over his other property. The right to thus repair a patented device is incidental to ownership. The fact that it is patented does not lessen the owner's right to put it in order when it gets out of repair, unless, considered as a whole, it is worn out and useless. When a patented machine is accidentally destroyed, or when it is practically worn out, the owner thereof, under the guise of repairing it, cannot make a new machine. In such cases he must cast it aside and buy a new one from the patentee. — Shickle *v.* St. Louis, 77 Fed. 739; 23 C. C. A. 433.

Wilson *v.* Simpson, 9 How. 109; Chaffee *v.* Belting, 22 How. 217; Tie Co. *v.* Simmons, 106 U. S. 89; Farrington *v.* Board, Fed. Cas. 4,687; Gottfried *v.* Brewing Co. 8 Fed. 322; Aikin *v.* Print, 1 Fed. Cas. 113; Singer *v.* Springfield, 34 Fed. 393; Wallace *v.* Holmes, Fed. Cas. 17,100.

It is manifest that a broken or worn-out cam effected only a partial destruction of the patented combination composed of three separate groups of mechanism, and that the replacement of the old cam with a new one was not a substantial rebuilding of the combination. If the patented invention had been for this particular form of cam, or had been simply for an improved feed, and the whole invention had resided substantially in the cam, the case would have presented a different aspect. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

When the patent is for a single thing, like a knitting needle, for example, and not for a device or machine composed of several things or elements combined, it is obvious that the replacement of an old needle by a new one in a knitting machine is not repair, but a reproduction of the patented thing. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

Aikin *v.* Manchester, 2 Cliff. 435; Morgan *v.* Albany, 152 U. S. 425; Wilson *v.* Simpson, 9 How. 109.

A practical reconstruction of the patented machine, and not necessarily a literal reconstruction of the patented combination, is all that is required to constitute infringement by the purchaser. For example, where the patent is for an improved lamp, and the whole invention resides in the burner, but

the claim is for the combination of the burner and a chimney, in an ordinary suit for infringement it must be shown that the defendant made or used or sold the patented combination, namely, the burner and the chimney; while in a suit for infringement against the purchaser of the lamp it would only be necessary to prove that he replaced the old burner with a new one, because, manifestly, that would constitute a substantial reconstruction of the patented invention. If a person other than the purchaser should make or sell the burner with the intent and purpose of its use by another in combination with the chimney, it would be a clear case of contributory infringement. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

Wallace *v.* Holmes, 9 Blatchf. 65.

To show infringement in the case of an ordinary infringer, where the patented invention comprises several elements in combination, it is necessary to prove that the alleged infringing machine contains all the elements (or their equivalents) which make up the combination, although some of the elements may not be material, or of the essence of the invention. To show infringement by the purchaser (by repairing) in such a case, the same strictness of proof is not required, for the reason that it may not be necessary for him to make the immaterial or unessential elements of the patented combination, because they may not be worn out or destroyed in his machine when the work of reconstruction begins. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

The purchaser of a patented machine, in order to infringe, must make or reproduce, in substance, the whole patented invention. To prove infringement, in one case, it is only necessary to show a partial infringement in aid of an unlawful complete infringement, while in the other case a substantially full and complete infringement must be established. The rule that a person may be guilty of contributory infringement by making or selling a material element of the patented combination has no application to infringement by the purchaser of a machine embodying such patented combination. A purchaser stands in no different position from an ordinary infringer, except in the circumstance that he has bought a patented machine, and, consequently, his infringement does not consist in the construction of a wholly new machine, but in the reconstruction of such machine after it is worn out, or substantially destroyed. The essence of infringement is the same in both cases. — Goodyear *v.* Jackson, 112 Fed. 146; 50 C. C. A. 159.

If this be lawful for the owner, it is equally so for the mechanic who is employed to do the work; the latter cannot be held as an infringer for making repairs which the former has an undoubted right to make. — Morrin *v.* White, 143 Fed. 519; 74 C. C. A. 466.

§ 525. Tests — Anticipation Test.

If the hoe made by the tool Company infringes the patent of the appellant, it was an anticipation of the invention, and the patent is void, for the testimony leaves no doubt whatever in our minds that the Company made and sold its hoes long before the date of the invention patented. If it is not an anticipation, it is not an infringement. — Cook *v.* Sandusky, 28 L. Ed. 124; 4 S. Ct. 4.

That which infringes if later would anticipate if earlier. — Knapp *v.* Morss, 150 U. S. 221; 37 L. Ed. 1059; 14 S. Ct. 81.

Peters *v.* Active, 129 U. S. 530; Thatcher *v.* Burtis, 121 U. S. 286; Grant *v.* Walter, 148 U. S. 547; Gordon *v.* Warder, 150 U. S. 47.

"That which infringes if later anticipates if earlier." — Miller *v.* Eagle, 151 U. S. 186; 38 L. Ed. 121; 14 S. Ct. 310.

Peters *v.* Active Mfg. Co. 129 U. S. 530; Thatcher *v.* Burtis, 121 U. S. 286; Grant *v.* Walter, 148 U. S. 547; Gordon *v.* Warder, 150 U. S. 47; Knapp *v.* Morss, 150 U. S. 221.

That which infringes if later, anticipates if earlier. — Muller *v.* Lodge, 77 Fed. 621; 23 C. C. A. 357.

Peters *v.* Mfg. Co. 21 Fed. 319; Peters *v.* Mfg. Co. 129 U. S. 537; Knapp *v.* Morss, 150 U. S. 221; Miller *v.* Mfg. Co. 151 U. S. 186.

The device used by the appellant cannot be held to be an infringement of the appellee's patent unless it would have been held — if used earlier than the patent — to have been an anticipation of the same; and certainly it is clear, if it had been set up as in prior use against the Streat patent, as it did not contain an apron used in the manner set forth in said patent, that it would not have been decreed to have been an anticipation. — American *v.* Streat, 83 Fed. 700; 28 C. C. A. 18.

Peters *v.* Mfg. Co. 129 U. S. 530; Knapp *v.* Morss, 150 U. S. 221; Heating Co. *v.* Burtis, 121 U. S. 286; Grant *v.* Walter, 148 U. S. 547; Gordon *v.* Warder, 150 U. S. 47.

It is a well-established rule that "that which infringes, if later, would anticipate if earlier;" and, conversely, that a device cannot be held to be an infringement unless it would have been held, if earlier than the patent, to have been an anticipation thereof. — Peerless *v.* White, 118 Fed. 827; 55 C. C. A. 502.

Tobacco *v.* Streat, 83 Fed. 700.

Note: The ill-considered application of this rule may well result in a wrong decision, as happened in this case, and as is clearly shown in the dissenting opinion of Judge Acheson.

A device which, if existent before the making of a patented invention, would not anticipate it, cannot, if made after the issue of the patent, be said to infringe it. — Cleveland *v.* Chicago, 135 Fed. 783; 68 C. C. A. 485.

With such differences his would not constitute an infringement of theirs, and of necessity theirs do not constitute anticipation of his. — St. Louis *v.* American, 156 Fed. 574; 84 C. C. A. 340.

Kokomo *v.* Kitselman, 189 U. S. 8; Greene *v.* Buckley, 135 Fed. 520.

It must be admitted that the Portland structure and device (the device of defendant) could not be patented. The necessary corollary is that the one device is not an infringement of the other. — Portland *v.* Hermann, 160 Fed. 91; 87 C. C. A. 247.

§ 526. Tests — Device and Claims.

When the invention or inventions are embodied in a machine, the question of infringement is best determined by a comparison of the machine made by the respondent with the mechanism described in the complainant's patent or patents, where more than one is embraced in the same suit. — Seymour *v.* Osborne, 78 U. S. 516; 20 L. Ed. 33.

Blanchard *v.* Putnam, 8 Wall. 426.

Except when form is the essence of the invention, it has but little weight in the decision of such an issue, the correct rule being that, in determining

the question of infringement, not to judge about similarities or differences in the names of things, but to look at the machines or their several devices or their elements in the light of what they do or what office or function they perform, and how they perform it, and to find that one thing is substantially the same as another, if it performs substantially the same function in substantially the same way to obtain the same result; always bearing in mind that devices in a patented machine are different in the sense of the patent law when they perform different functions or in a different way, or produce a substantially different result. — Union *v.* Murphy, 97 U. S. 120; 24 L. Ed. 935.

Cahoon *v.* Ring, 1 Cliff. 620.

In determining infringement, we are entitled to look at the practical operation of the machines. If the device of respondents shows a substantially different mode of operation, even though the result of the operation of the machine remains the same, infringement is avoided. — Cimiotti *v.* American, 198 U. S. 399; 49 L. Ed. 1100; 25 S. Ct. 697.

Brooks *v.* Fiske, 15 How. 212; Union *v.* Battle Creek, 104 Fed. 337.

Infringement is to be determined by a consideration of the claims, and if their language is such that, upon a fair consideration of them, defendant's structure does not fall within their terms, infringement cannot be found. — Hoe *v.* Miehle, 149 Fed. 213; 79 C. C. A. 171.

§ 527. Tests — Function.

An alleged infringing combination, which has no adaptation for accomplishing the essential functions which the combination patented was, on the face of the patent, intended to accomplish, cannot ordinarily be held to truly infringe. — Boston *v.* Bemis, 80 Fed. 287; 25 C. C. A. 420.

Long *v.* Mfg. Co. 75 Fed. 835.

A function not being patentable, the mere fact of the performance of this function by the new means operating in a new way, cannot serve constructively to make it an infringement of the means not used, where the invention is of the limited character shown in this patent. — Mann *v.* Hoffmann, 104 Fed. 245; 43 C. C. A. 514.

Where infringement would naturally or necessarily result from the ordinary use of a device, a defendant cannot escape liability for infringement by merely showing the possibility of a different use. The decisive question is whether the operation of the alleged infringing device when in use is the same, and produces the same results. — Davis *v.* Perry, 120 Fed. 941; 57 C. C. A. 231.

Snyder *v.* Bunnell, 29 Fed. 47; Westinghouse *v.* N. Y. 59 Fed. 597; Thomson-Houston *v.* Kelsey, 72 Fed. 1016.

Identity of result is, however, not a sufficient test of infringement. There must also be substantial identity of the means and manner of accomplishment. — Heekin *v.* Baker, 138 Fed. 63; 70 C. C. A. 559.

§ 528. Tests — Interchangeability.

Interchangeability test of. — Miller *v.* Eagle, 151 U. S. 186; 38 L. Ed. 121; 14 S. Ct. 310.

Prouty *v.* Ruggles, 41 U. S. 336; Brooks *v.* Fiske, 56 U. S. 212; Eames *v.* Godfrey, 68 U. S. 78.