

less, there was evidently just ground for Vanderbilt's hesitation. I see no reason to question the fact that whatever dispute or controversy there was at the time was a *bona fide* controversy, based upon probable grounds, on Vanderbilt's part. An adjustment of such a controversy, made by the parties themselves, must be presumed *prima facie* to have been made in accordance with their actual, original intention; and this intention is moreover shown, by the testimony of McAdam, to have been in accordance with the settlement made. It was at all times competent for the parties to modify their original agreement by adding a new clause providing for the guaranty. Such a modification would have been sustained as part of the original intention. No other consideration than that intention would have been necessary to sustain it. When an adjustment of a *bona fide* controversy on such a point has been fully executed, it should be sustained as being, *prima facie*, done upon a modification of the original written contract to accord with such intention; precisely as if the original agreement had at the same time been modified accordingly. Schreyer, it is true, denies the statements of McAdam; but the latter is sustained by the evidence of the acts and conduct of Vanderbilt, and his testimony should, I think, be followed.

For these reasons the proof of debt on the guaranty is directed to be allowed.

LYMAN v. MAYPOLE and others.

(Circuit Court, N. D. Illinois. February 11, 1884.)

1. PATENTS FOR INVENTION—PERFECTING DEVICE—PUBLIC USE.

The law permits an inventor to construct a machine which he is engaged in studying upon and developing, and place it in friendly hands for the purpose of testing it and ascertaining whether it will perform the functions claimed for it, and if these machines are strictly experiments, made solely with a view to perfect the device, the right of the inventor remains unimpaired: but when an inventor puts his incomplete or experimental device upon the market, and sells it, as a manufacturer, more than two years before he applies for his patent, he gives to the public the device in the condition or stage of development in which he sells it. In such case his patent cannot be allowed to relate back and cover forms which he gave to the public more than two years before he applied for a patent.

2. SAME—PATENT NO. 179,581 CONSTRUED—INFRINGEMENT.

The Wilfred C. Lyman patent of July 4, 1876, No. 179,581, construed, and held not to be infringed by a condenser head having an enlarged drain-pipe instead of a hand-hole, and not having inside cones with turned rims or edges.

In Equity.

George P. Barton, for complainant.

Banning & Banning and Charles C. Linthicum, for defendants.

BLODGETT, J. This is a bill to enjoin an alleged infringement by the defendants of a patent issued to the complainant for an "improve-

ment in traps for exhaust steam pipes." The object and scope of the invention is set out by the patentee as follows:

"The object I have in view is to provide the top of the exhaust pipe of a non-condensing steam-engine with a head which will not only trap off the water of condensation carried up the pipe with the exhaust steam, but also the grease used for lubricating the cylinder, and carried up by the exhaust steam. The invention consists in the peculiar construction of the cap and the combination therewith of the deflectors and conduits, and a hand-hole in one side of the cap, through which access is had to the interior for removing grease and solid matter settling therein."

The general scope of this invention is, that the steam, carrying with it some spray or water, and the melted grease or oil ejected with the steam, reaches by the exhaust pipe the arrangement shown in the condensing head; there the steam is deflected, sent around the cold edges of the large surface, where the water, which has already become condensed, is caught upon the deflectors and upon the head of the cap of the condenser, and is condensed, so that the water falls into some of the receptacles for it; it either is condensed and passes into the lower skirt, which is inverted, and runs down and passes into the channels and flows through the outlet pipe, or it is held by the upturned edges, which are shown by the model, so that whatever steam is discharged is mainly dry steam that will not readily condense, and passes into the air without depositing any water or grease on the adjacent roofs or buildings.

The defendants deny the infringement of the complainant's patent, and also insist that the complainant made, and sold, and put in public use condensers, in the form now made and used by the defendants, more than two years prior to the complainant's application for a patent and the issue of his patent. It is insisted that by such public use the complainant has lost the right to cover a device so given to the public by his patent. The proof in the case, which I will not stop to read, is briefly this: Some years ago, in 1870, 1871, and 1872, the complainant commenced the manufacture of these condensing heads. He began by manufacturing a condenser head something like that shown in the proof marked, "Lyman's Old Head," which is admitted to be a substantially correct illustration of what the defendant now makes. In 1872 he manufactured several of these, at least four of which he sold and put in public use. They were not experimental heads, in the strict sense of the word, such as are allowed within certain limits to be made and used by an inventor as experiments. The law permits an inventor to construct a machine which he is engaged in studying upon and developing, and place it in friendly hands for the purpose of testing it, and ascertaining whether it will perform the functions claimed for it; and if these machines are strictly experiments, made solely with a view to perfect the device, the right of the inventor remains unimpaired; but when an inventor puts his incomplete or experimental device upon the market and sells it, as a manufacturer, more than two years be-

fore he applies for his patent, he gives to the public the device in the condition or stage of development in which he sells it. The proof in this case shows that during the year 1872, and forepart of 1873, complainant made and sold at least four of these condenser heads, made in all respects like the "Exhibit Lyman's Old Head." They were not experiments, but were made, sold, and put in use by complainant in his business as a manufacturer. In the mean time the complainant continued his experiments, and after a time increased the size of the upper deflector so that it overhung the lower one, and turned up the edges of the upper, and turned down the edges of the lower deflector, so that they have the shape shown in his final patent; and in April, 1876, he applied for his patent, which was issued a few months afterwards, in which he specifically describes his device, including the upturned edges of the upper deflector, and the down-turned edges of the lower deflector. His claims specifically call for the deflectors with the edges turned as described. The claims are as follows:

"(1) The combination of the cap, B, B', escape pipe, A', deflectors, C, C', and conduits, c, D, said deflectors and conduits provided with curved outer rims or edges, with the exhaust pipe of a non-condensing engine, substantially as and for the purpose set forth.

"(2) The combination of the cap, B, B', escape pipe, A', deflectors, C, C', conduits, c, D, and hand-hole, E, with the exhaust pipe, A, of a non-condensing steam-engine, substantially as and for the purpose set forth."

Both these claims, as I construe them, call for these deflecting plates with turned edges.

The complainant's device also shows a "hand-hole" for the purpose of removing the grease, soot, or other solid matter which may collect in the condenser. The defendants, instead of using a "hand-hole" located as shown in the patent, insert a large screw plug near the lower end or apex of the inverted cone, through which plug the drain pipe passes, and by unscrewing and removing this plug, a hook or wire can be inserted and used to clean out the solid matter. This is not a "hand-hole," as called for by the specifications of complainant's patent, but is a mere enlargement of the drain or discharge pipe. I find, therefore, that in the general features of the condensers made by defendants, they conform to those which complainant made and gave to the public at least three years before he applied for his patent; and, in construing complainant's patent, I must hold him bound by the state of the art as he developed it up to 1872 and 1873, and that his patent cannot be allowed to relate back and cover the forms of condensers which he gave to the public more than two years before he applied for his patent. The complainant's bill must be dismissed for want of equity.

Prior to 1836 our patent laws contained no provision in reference to abandonment or dedication of an invention to the public by uses or sales before the filing of an application for a patent. The supreme court, however, decided v.19,no.10—47

in 1829 that an inventor might abandon his invention to the public by such uses or sales, and, speaking through Justice STORY, said: "Upon most deliberate consideration we are all of opinion that the true construction of the act is that the first inventor cannot acquire a good title to a patent if he suffers the thing invented to go into public use, or to be publicly sold for use, before he makes application for a patent. His voluntary act or acquiescence in the public sale and use is an abandonment of his right, or rather creates a disability to comply with the terms and conditions on which alone the secretary of state is authorized to grant him a patent."¹ This doctrine, which had been previously announced by Justice STORY² and by Justice WASHINGTON,³ was reiterated by the supreme court in 1833.⁴ And "at common law the better opinion, probably, is that the right of property of the inventor to his invention or discovery passed from him as soon as it went into public use with his consent; it was then regarded as having been dedicated to the public as common property, and subject to the common use and enjoyment of all."⁵

The act of 1836 provided that a patent should not be issued for an invention which was, "at the time of his [the inventor's] application for a patent, in public use or on sale with his consent and allowance." The act of 1839 changed this so as to allow uses or sales for not "more than two years prior to such application for a patent;" and, so far as regards time, this provision has been frequently re-enacted, and is still in force. It has never been considered, however, that this rule, first announced by the supreme court,⁶ and afterwards made the subject of legislation, has the least application to uses purely experimental, made in good faith for the purpose of testing or perfecting an invention. The question, how far an invention may be used for the purposes of experiment or test, is often a difficult one, but the general rule on this subject, particularly when the question of sales comes in, is well stated by Judge BLDGERR in the foregoing opinion: "The law permits an inventor to construct a machine which he is engaged in studying upon and developing, and place it in friendly hands for the purpose of testing it, and ascertaining whether it will perform the functions claimed for it, and if these machines are strictly experiments, made solely with the view to perfect the device, the right of the inventor remains unimpaired; but when an inventor puts his incomplete or experimental device upon the market, and sells it, as a manufacturer, more than two years before he applies for his patent, he gives to the public the device in the condition or stage of development in which he sells it." And so it is always to be borne in mind that there is a clear distinction between mere experiments and ordinary uses or sales made for other purposes than testing or perfecting an invention.

EXPERIMENTS ENCOURAGED. Patents are only to be granted for useful inventions, and to prevent their being issued for crude, imperfect, or impracticable ones, the law encourages, not to say requires, an inventor to make proper experiments to fully test and determine the practical utility of his invention before applying for a patent. "He is the first inventor, in the sense of the act, and entitled to a patent for his invention, who has first perfected and adapted the same to use; and until the invention is so perfected and adapted to use it is not patentable. An imperfect and incomplete invention, resting in mere theory, or in intellectual notion, or in uncertain experiments, and not actually reduced to practice, and embodied in some distinct machinery, apparatus, manufacture, or composition of matter, is not, and in-

¹ Pennock v. Dialogue, 2 Pet. 22.

² Mellus v. Silsbee, 4 Mason, 108; 1 Rob. 509.

³ Treadwell v. Bladen, 4 Wash. 703; 1 Rob. 539.

⁴ Shaw v. Cooper, 7 Pet. 292.

⁵ Nelson, J., in Wilson v. Rousseau, 4 How. 674. See, also, American Leather Co. v. American Tool Co. 4 Fisher, 294; Dudley v. Mayhew, 3 N. Y. 9.

⁶ Pennock v. Dialogue, supra.

deed cannot be, patentable under our patent acts; since it is utterly impossible under such circumstances to comply with the fundamental requisites of those acts."¹ Justice CLIFFORD quotes this language in *White v. Allen*,² but first says: "While the suggested improvement, however, rests merely in the mind of the originator of the idea, the invention is not completed within the meaning of the patent law, nor are crude and imperfect experiments sufficient to confer a right to a patent; but in order to constitute an invention in the sense in which that word is employed in the patent act, the party alleged to have produced it must have proceeded so far as to have reduced his idea to practice, and embodied it in some distinct form."³ Mere discovery of an improvement does not constitute it the subject-matter of a patent, although the ideas which it involves may be new; but the new set of ideas, in order to become patentable, must be embodied into working machinery and adapted to practical use."⁴

"The relation borne to the public by inventors, and the obligations they are bound to fulfill in order to secure from the former protection and the right to remuneration, by no means forbid a delay requisite for completing an invention, or for a test of its value or success by a series of sufficient and practical experiments; nor do they forbid a discreet and reasonable forbearance to proclaim the theory or operation of a discovery during its progress to completion, and preceding an application for protection in that discovery. The former may be highly advantageous, as tending to the perfecting the invention; the latter may be indispensable, in order to prevent a piracy of the rights of the true inventor."⁵

"It is when speculation has been reduced to practice; when experiment has resulted in discovery, and when that discovery has been perfected by patient and continued experiments; when some new compound, art, manufacture, or machine has been thus produced, which is useful to the public,—that the party making it becomes a public benefactor, and entitled to a patent."⁶

"When the idea first enters into the mind of the inventor, it is almost necessarily in a crude and imperfect state. His mind will naturally dwell and reflect upon it. It is not until his reflections, investigations, and experiments have reached such a point of maturity that he not only has a clear and definite idea of the principle, and of the mode and manner in which it is to be practically applied to useful purposes, but has reduced his idea to practice and embraced it in some distinct form, that it can be said he has achieved a new and useful invention."⁷

"The terms 'being an experiment,' and 'ending in experiment,' are used in contradistinction to the term 'being of practical utility.' Until of practical utility, the public attention is not called to the invention; it does not give to the public that which the public lays hold of as beneficial."⁸

"If he has been practicing his invention with a view of improving it, and thereby rendering it a greater benefit to the public before taking out a patent, that ought not to prejudice him."⁹

"Crude and imperfect experiments are not sufficient to confer a right to a patent; but in order to constitute an invention the party must have proceeded so far as to have reduced his idea to practice, and embodied it in some distinct form."¹⁰

¹Story, J., in *Reed v. Cutter*, 1 Story, 590; 2 Rob. 90.

²2 Fisher, 446.

³*Gaylor v. Wilder*, 10 How. 498; *Parkhurst v. Kinsman*, 1 Blatchf. 494; *Curt. Pat.* 2 43.

⁴*Sickles v. Borden*, 3 Blatchf. 535.

⁵*Daniel, J.*, in *Kendall v. Winsor*, 21 How. 328.

⁶*Grier, J.*, in *Roberts v. Reed Torpedo Co.* 3 Fisher, 631.

⁷*Jones, J.*, in *Matthews v. Skates*, 1 Fisher, 606.

⁸*Sprague, J.*, in *Howe v. Underwood*, 1 Fisher, 166.

⁹*Morris v. Huntington*, 1 Rob. 455.

¹⁰*Seymour v. Osborne*, 11 Wall. 552. As to this general question of experiments,

DILIGENCE REQUIRED. Although an inventor is thus allowed and encouraged to make such experiments as will fully test and determine the practical utility of his invention, still he must exercise due diligence, and not be unreasonably slow in making them. "If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should for a long period of years retain the monopoly, and make and sell his invention publicly, and thus gather the whole profits of it, relying upon his superior skill and knowledge of the structure, and then, and then only, when the danger of competition should force him to secure the exclusive right, he should be allowed to take out a patent, and thus exclude the public from any farther use than what should be derived under it during his fourteen years, it would materially retard the progress of science and the useful arts, and give a premium to those who should be least prompt to communicate their discoveries."¹

"The question of diligence is not an absolute but a relative one, and must be considered in reference to the subject-matter of the experiments. Could the value and practical utility of such an invention be sooner ascertained?"² It must also be considered with reference to the position and circumstances of the inventor. "The law means, by invention, not maturity. It must be the idea struck out, the brilliant thought obtained, the great improvement in embryo. He must have that; but if he has that he may be years improving it—maturing it. It may require half a life. But in that time he must have devoted himself to it as much as circumstances would allow. * * * You would not trip up a man of genius, who had made a discovery, in consequence of a want of means to prosecute his labors to their final consummation, if you thought he intended to persevere."³ "There must be what we would consider reasonable diligence, looking at all the facts of the case."⁴ "But mere forbearance to apply for a patent during the progress of experiments, and until the party has perfected his invention and tested its value by actual practice, affords no just grounds for any such presumption" of abandonment.⁵ "The question of abandonment * * * is a question of fact, and to be determined by the evidence. Lapse of time does not, *per se*, constitute abandonment. It may be a circumstance to be considered. The circumstances of the case, other than mere lapse of time, almost always give complexion to delay, and either excuse it or give it conclusive effect. The statute has made contemporaneous public use, with the consent and allowance of the inventor, a bar, when it exceeds two years. But in the absence of that, and of any other colorable circumstances, we know of no mere period of delay which ought, *per se*, to deprive an inventor of his patent."⁶

"It should always be a question submitted to the jury, what was the intent of the delay of the patent, and whether the allowing the invention to be used without a patent should not be considered an abandonment or present of it to the public.⁷ But "the objection rests upon the principle of forfeiture, and is

see, also, *Whitely v. Swayne*, 7 Wall. 687; *Draper v. Potomska Mills Corp.* 3 Ban. & A. 215; *N. W. Fire Exting. Co. v. Philadelphia Fire Exting. Co.* 1 Ban. & A. 189; *Albright v. Celluloid Harness Trimming Co.* 2 Ban. & A. 635.

¹ *Pennock v. Dialogue*, 2 Pet. 19; *Kendall v. Winsor*, 21 How. 330.

² *Nixon, J.*, in *American Nicholson Pavement Co. v. City of Elizabeth*, 6 Fisher, 432.

³ *Woodbury, J.*, in *Adams v. Edwards*, 1 Fisher, 7, 11. See, also, *Smith v. Good-year D. V. Co.* 93 U. S. 491; *Sprague v. Adriance*, 3 Ban. & A. 124.

⁴ *Drummond, J.*, in *Cox v. Griggs*, 2 Fisher, 177.

⁵ *Agawam Co. v. Jordan*, 7 Wall. 607, *Jones v. Sewall*, 6 Fisher, 365; *Locomotive Engine Safety Truck Co. v. Pennsylvania R. Co.* 1 Ban. & A. 483; *Miller v. Smith*, 5 Fed. Rep. 364; *Webster v. New Brunswick Carpet Co.* 1 Ban. & A. 91; *Kelleher v. Darling*, 3 Ban. & A. 448.

⁶ *Woodruff, J.*, in *Russell & Erwin Manufg Co. v. Mallory*, 5 Fisher, 641; *Benedict, J.*, in *Andrews v. Carman*, 2 Ban. & A. 295.

⁷ *Morris v. Huntington*, 1 Paine, 348; 1 *Rob.* 455; *Shaw v. Cooper*, 7 Pet. 316.

not to be favorably regarded. Every reasonable doubt should be raised against it."¹

KINDS OF EXPERIMENTS. Of course, the character of an inventor's tests or experiments must depend largely on the nature of his invention. "Some inventions are by their very character only capable of being used where they cannot be seen or observed by the public eye. An invention may consist of a lever or spring hidden in the running gear of a watch, or of a ratchet, shaft, or cog-wheel covered from view in the recesses of a machine for spinning or weaving. Nevertheless, if its inventor sells a machine of which his invention forms a part, and allows it to be used without restriction of any kind, the use is a public one. So, on the other hand, a use necessarily open to public view, if made in good faith, solely to test the qualities of the invention and for the purpose of experiment, is not a public use within the meaning of the statute."²

"When the subject of invention is a machine, it may be tested and tried in a building either with or without closed doors. In either case such use is not a public use, within the meaning of the statute, so long as the inventor is engaged in good faith in testing its operation. He may see cause to alter it and improve it or not. His experiments will reveal the fact whether any and what alterations may be necessary. If durability is one of the qualities to be attained, a long period, perhaps years, may be necessary to enable the inventor to discover whether his purpose is accomplished. And though during all that period he may not find that any changes are necessary, yet he may be justly said to be using his machine only by way of experiment; and no one would say that such a use, pursued with a *bona fide* intent of testing the qualities of the machine, would be a public use within the meaning of the statute. So long as he does not voluntarily allow others to make it and use it, and so long as it is not on sale for general use, he keeps the invention under his own control, and does not lose his title to a patent. It would not be necessary, in such a case, that the machine should 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 still be a mere experimental use, and not a public use within the meaning of the statute."³

"Nor has it any bearing upon the case that Smith's experiments were made in public, and that his experimental engines were run upon a railroad that was a public highway. Thus only could the invention be tested. *There is an*

¹ *Birdsall v. McDonald*, 1 Ban. & A. 167; *Henry v. Francetown Soap-stone Stove Co.* 2 Ban. & A. 224; *American Leather Co. v. American Tool Co.* 4 Fisher, 291; *Jones v. Sewall*, 6 Fisher, 368; *Jennings v. Pierce*, 3 Ban. & A. 365; *Graham v. McCormick*, 11 Fed. Rep. 863; 5 Ban. & A. 249; *Emery v. Cavanaugh*, 17 Fed. Rep. 243; *Hovey v. Henry*, 3 West. Law J. 153.

As to effect of delays in the patent office after an application has been filed, see *Planing Machine Co. v. Keith*, 4 Ban. & A. 100; 101 U. S. 479; *Adams v. Jones*, 1 Fisher, 527; *Bevin v. East Hampton Bell Co.* 5 Fisher, 23; *McMillin v. Barclay*, Id. 200; and for particular cases in which use has been held not to have been experimental, but sufficient to invalidate patent,

see *Shaw v. Cooper*, 7 Pet. 322; *Watson v. Bladen*, 1 Rob. 514; *Sanders v. Logan*, 2 Fisher, 167; *Worley v. Tobacco Co.* 104 U. S. 340; *Sisson v. Gilbert*, 5 Fisher, 112; *Perkins v. Nashua Card & Glazed Paper Co.* 2 Fed. Rep. 451; 5 Ban. & A. 398; *Edgerton v. Furst & Bradley Manuf'g Co.* 9 Fed. Rep. 450; *Clark Pomace-holder Co. v. Ferguson*, 17 Fed. Rep. 79; *Manning v. Cape Ann Isinglass & Glue Co.* 2 Sup. Ct. Rep. 860; *Kells v. McKenzie*, 9 Fed. Rep. 284.

² *Woods, J.*, in *Egbert v. Lippmann*, 104 U. S. 336. See, also, *Elizabeth v. Pavement Co.* 97 U. S. 126; *Shaw v. Cooper*, 7 Pet. 292.

³ *Bradley, J.*, in *Elizabeth v. Pavement Co.* 97 U. S. 134.

obvious distinction between a public use, or a use by the public, and an experimental use in public. In many cases it has been decided that a use in public, for test or experiment, is not such a public use as was contemplated by the act of congress, nor such a use as can be held evidence of dedication to the public. The *Nicholson Pavement Case* was notably one.¹ "Public use in good faith for experimental purposes, and for a reasonable period, even before the beginning of the two years of limitation, cannot affect the rights of the inventor."² "I agree his acts are to be construed liberally; that he is not to be estopped by licensing a few persons to use his invention to ascertain its utility, or by any such acts of peculiar indulgence and use as may fairly consist with the clear intention to hold the exclusive privilege."³ "It is clearly immaterial whether the experiment be made by himself or by others; the only question being, is he the original inventor of an art not before known or used?"⁴ "It does not appear to me that the submitting of an invention to the test of examination by experts, in competition with other inventions, is the public use to which the statute refers. A use for the mere purpose of competitive examination, experiment, and test, is not a public use."⁵

"I consider it too nice a point to say that the future patentee, when he permits a person to test his tool by a short use with a view to interest him in its being patented, is not testing his tool, but only the mind of the borrower. I do not know that an inventor is bound to satisfy his own mind alone by his experiments. The question to be determined is, not only whether the tool will work, but in what modes and with what advantages over old tools; how well it will work, and how cheaply; and I am of opinion that he may, in such a case as this, test not only its patentability, but the degree of it, if I may so say; that is, whether it is worth while to patent it. I must not be understood as speaking of a case in which the tool or thing patented has been sold more than two years before the application."⁶

"The evidence does not show any such public use or sale, with the consent of Dodge, for two years prior to his application, as would work a forfeiture of his patent. There is one case only of a sale clearly proved before February 14, 1855, and no evidence tending to show more than two or three sales before that time, and all of them accompanied with a notice of an intention to apply for a patent, and all of these during the time when he was experimenting upon and before he had perfected his invention, and attained sufficient perfection in the castings to satisfy him that his invention was practically successful. As in most, if not in all, of these instances the stoves were delivered on trial, to be returned if the invention did not work satisfactorily, they are to be regarded rather in the light of such practical tests as the law permits an inventor to make, than as such public sales as would tend to show abandonment, or mislead the public into a belief that the inventor had made a dedication to the public."⁷ On a rehearing of this case Judge LOWELL took a different view as to the effect of these sales, and held that the mere fact that they were conditional did "not, without further explanation, prove that they were experimental," and that "the evidence should be unequivocal that a test of the invention was one of the purposes of the seller."⁸

¹Strong, J., in *Locomotive Engine Safety Truck Co. v. Pennsylvania R. Co.* 1 Ban. & A. 484.

²Birdsall v. McDonald, 1 Ban. & A. 167; Henry v. Francestown Soap-stone Stove Co. 2 Ban. & A. 223.

³Story, J., in *Mellus v. Silsbee*, 4 Mason, 108; 1 Rob. 509. See, also, *Jones v. Sewall*, 6 Fisher, 364.

⁴Washington, J., in *Pennock v. Dialogue*, 4 Wash. 538; 1 Rob. 472.

⁵Shipman, J., in *U. S. Rifle & Cartridge Co. v. Whitney Arms Co.* 2 Ban. & A. 501.

⁶Lowell, J., in *Sinclair v. Backus*, 4 Fed. Rep. 542; 5 Ban. & A. 84.

⁷Shepley, J., in *Henry v. Francestown Soap-stone Stove Co.* 2 Ban. & A. 224.

⁸Henry v. Francestown Soap-stone Stove Co. 2 Fed. Rep. 80; 5 Ban. & A. 110. See, also, *Kells v. McKenzie*, 9 Fed. Rep. 284.

"It is manifest that the only machine made in 1863, which is distinctly proved to have been sold, was delivered on trial and warranted, and should be regarded rather in the light of a use of the invention for such practical tests as the law permits an inventor to make, than as such a public sale or use as is contemplated by the statute. At that stage of the inventor's work his invention was largely in experiment and trial. It could only be tested by practical use in the field, and it was essential that it should be so tested by farmers on their farms. The inventor was then struggling, as inventors often do, to establish the success of his invention. It was necessary that thorough experimental tests should be made, and that he should have the assistance of others in making them; and it is manifest, we think, that the machines of 1863 were not yet so perfected as to be practical machines, capable of successful work."¹

"If it was merely used occasionally by himself in trying experiments, or if he allowed only a temporary use thereof by a few persons, as an act of personal accommodation or neighborly kindness for a short and limited period, that would not take away his right to a patent."² "The law permits an inventor to construct a machine, * * * and place it in friendly hands for the purpose of testing it and ascertaining whether it will perform the functions claimed for it."³ "The use of an invention by special permission of the patentee is not a use of it by the public. * * * A right abandoned to the public, doubtless, cannot be resumed; but a license restrained to individuals is not an abandonment."⁴ "But if the inventor allows his machine to be used by other persons generally, either with or without compensation, or if it is, with his consent, put on sale for such use, then it would be in public use and on public sale within the meaning of the law."⁵ And "to constitute the public use of an invention it is not necessary that more than one of the patented articles should be publicly used."⁶

"He is not allowed to derive any benefit from the sale or the use of his machine without forfeiting his right, except within two years prior to the time he makes his application."⁷ But "it would be a harsh limitation of the statutory rights of an inventor which should give to a naked infringer the privilege of using an invention because the patentee had attempted, in good faith and in secrecy, to incidentally make his experiments of some pecuniary benefit, while he was patiently endeavoring, amid many failures, to remedy the defects of the machine, test its value, and ascertain whether it could be used advantageously, and whether it ever would be of any benefit either to himself or to the public."⁸ And "whilst the supposed machine is in such experimental use the public may be incidentally deriving a benefit from it."⁹

"When an inventor puts his incomplete or experimental device upon the market and sells it, more than two years before he applies for his patent, he gives to the public the device in the condition or stage of development in which he sells it. * * * His patent cannot be allowed to relate back and cover the forms of condensers which he gave to the public more than two years before he applied for his patent."¹⁰

¹ Drummond, J., in *Graham v. McCormick*, 11 Fed. Rep. 862; 5 Bann. & A. 249; and Dyer, J., in *Graham v. Geneva Lake Crawford Manuf'g Co.* 11 Fed. Rep. 142.

² Story, J., in *Wyeth v. Stone*, 1 Story, 273; 2 Rob. 30.

³ Blodgett, J., in *Lyman v. Maypole*, supra.

⁴ *McKay v. Burr*, 6 Pa. 153.

⁵ *Elizabeth v. Pavement Co.* 97 U. S. 135.

⁶ *Egbert v. Lippmann*, 104 U. S. 336; *Consolidated Fruit-jar Co. v. Wright*, 94 U. S. 94; *Manning v. Cape Ann Isinglass*

& *Glue Co.* 2 Sup. Ct. Rep. 860; *Worley v. Tobacco Co.* 104 U. S. 343; *Jones v. Barker*, 11 Fed. Rep. 597; *Clark Pomace-holder Co. v. Ferguson*, 17 Fed. Rep. 83.

⁷ *Nelson, J.*, in *Pitts v. Hall*, 2 Blatchf. 235. See, also, *Consolidated Fruit-jar Co. v. Wright*, 94 U. S. 94; *Jones v. Sewall*, 6 Fisher, 364.

⁸ *Shipman, J.*, in *Jennings v. Pierce*, 3 Ban. & A. 365.

⁹ *Elizabeth v. Pavement Co.* 97 U. S. 135.

¹⁰ *Blodgett, J.*, in *Lyman v. Maypole*, supra.

AS TO DESIGN PATENTS. These rules also apply to design patents. "The law applicable to this class of patents does not materially differ from that in cases of mechanical patents. * * * The same general principles of construction extend to both."¹ "An inventor is not permitted to exhibit his skill and taste in decorative art by the publication of elegant designs through a course of years, and then debar the public from any further use by obtaining letters patent for the same."²

It will be observed that I have simply collated the authorities, and made but few comments and no criticisms. The language of some of the cases, particularly when they speak of the inventor's "consent and allowance," should be understood with reference to the law then in force or governing the decision; but this does not affect their bearing on the general question of experiments. As to this question the following principles may be considered as fully established: (1) The law permits and encourages proper experiments to test and determine the practical utility of an invention; (2) these experiments must be made with reasonable diligence, considering all the circumstances of the case; (3) they may be made secretly or in public, by uses or sales, and by the inventor personally or through others; (4) they must not be for profit, but for the honest purpose of testing and perfecting the invention; and (5) where improvements are added within the two years, the patent cannot be allowed to relate back and cover forms previously given to the public.

EPHRAIM BANNING.

Chicago, March, 1884.

¹Brown, J., in *Northup v. Adams*, 2 Ban. & A. 588; *Blodgett, J.*, in *Western Electric Manuf'g Co. v. Odell*, 18 Fed. Rep. 322.

²Nixon, J., in *Theberath v. Celluloid Harness Trimming Co.* 15 Fed. Rep. 250.

DOYLE v. SPAULDING and others.

ILLINGWORTH v. SAME.

(Circuit Court, D. New Jersey. March 15, 1884.)

1. PATENT—INFRINGEMENT.

Infringement of patent for the manufacture of combined ingots of iron and steel by means of moulds and a mechanism producing a variable cavity in the moulds.

2. SAME—INVENTION IN A FOREIGN COUNTRY.

The use or knowledge of the use of an invention in a foreign country by persons residing in this country will not defeat a patent which had been granted to a *bona fide* patentee who, at the time, was ignorant of the existence of the invention or its use abroad.

In Equity.

J. C. Clayton, for complainants.

Francis Forbes, (with whom was A. Q. Keasbey,) for defendants.

NIXON, J. These two cases will be considered together, for reasons which will hereafter appear. On March 5, 1881, the complainant, Illingworth, commenced a suit in this court against the defendants for infringement of letters patent No. 166,700, dated August 17,