

SINGER ET AL. V. WALMSLEY.

{1 Fish. Pat. Cas. 558.}¹

Circuit Court, D. Maryland.

Feb., 1860.

PATENTS—EQUIVALENTS—EXPERIMENTS—DISCLAIMER—REISSUE—SEWING
MACHINES.

1. Patents are not monopolies, because a monopoly is that which segregates that which was common before, and gives it to one person or class, for use or profit; a patent brings out from the realm of mind something that never existed before, and gives it to the country.
2. When a party has discovered a result, as well as the machinery that produces it, he has a right to invoke the doctrine of equivalents in reference to infringers.
3. But where he is only the original inventor of a device, he can only recover against an infringer, if he shows that he has substantially copied his invention. In other words, being an improver himself, he can not invoke the doctrine of equivalents to help him.
4. It does not matter how many experiments have been tried by different inventors, if they failed, if they were never perfected, if they were never brought into use, if they rested in experiment alone.
5. If the feeding of the cloth and tightening of the stitch, were necessities in automatic sewing machines, which have been provided for by various devices before the inventions of Singer, then, if the defendants, in the construction of their machines, have provided for said necessities by mechanism or combinations of mechanism substantially different from the mechanism described in the patents of Singer, there is no infringement.

{Cited in Johnson v. McCabe, 37 Ind. 538.}

6. If the defendants use only one or two of the mechanical devices described by the plaintiff, or two combined with a third which is substantially different in form or in the manner of its arrangement and connection with the others, then there is no infringement.
7. If, from the specifications and drawings taken as a whole, any person skilled in the art could construct the sewing machine therein described, without invention of his own,

the patent is good, although there may be a mistake in describing the action of some part of the machinery, which could be easily discovered by the mechanic in making the machine.

8. It is not necessary that the jury should find that the defendants have infringed all the claims, if there be more than one in a particular patent.
9. If inventions, not new or original with the patentee, are included in the specification by mistake, accident, or inadvertence, and without willful default or intent to defraud or mislead the public, the patent is good and valid for so much of the invention or discovery as is truly and bona fide the invention of the patentee.
10. But if no disclaimer be entered in the patent office before suit is brought, the plaintiff can not recover costs against the defendant, although infringement of the valid claims be proved.
11. But, if, when the patentee applied for a reissue of his original patent, he well knew he was not the first inventor of the invention mentioned in any of his claims, then his patent is void, and no recovery can be had thereon.

[Cited in *Office Specialty Manuf'g Co. v. Globe Co.*, 65 Fed. 605.]

12. If the result of the mechanism, used by the defendants, is greatly superior to that described and claimed by the patentee, this fact may be considered, by a jury, as tending to prove that the mechanism of the defendants is a new invention, substantially different from that described by plaintiff.

[Cited in *Smith v. Woodruff*, Case No. 13,128a.]

13. If the patented improvement had been previously described by another, in a written deposition, in terms sufficient to enable a mechanic skilled in the art to construct the improvement; and such description was known to the patentee when he applied for his patent, said patent is void.

This was an action on the case tried by Judge Giles and a jury, to recover damages [from William H. Walmsley] for alleged infringements of certain patents owned by the plaintiffs for improvements in sewing machines. The declaration contained six counts and alleged infringement of six different patents. It may be

added, that the case was on trial for six weeks, or one week for each-count and patent.

The first count was upon letters patent [No, 6,099] granted to Charles Morey and Joseph B. Johnson February 6, 1849, reissued to Isaac M. Singer and Edward Clark, plaintiffs, as assignees, June 27, 1854, and again reissued to them, in two parts, January 12, 1858 [No. 518]. No evidence was offered by the plaintiffs to sustain this count, and the court directed a verdict to be entered thereon for the defendants.

The second count was upon letters patent [No. 8,294] granted to Isaac M. Singer August 12, 1851, and reissued to him October 3, 1854 [No. 278]. The claims of the reissued patent were as follows: What I claim is, giving to-the shuttle an additional forward movement after it has been stopped to close the loop, as described, for the purpose of drawing the-stitch tight, when such an additional movement is given at and in combination with the feed motion of the cloth in the reverse direction; and the final upward motion of the needle, as described, so that the two threads-shall be drawn tight at the same time, as described. I also claim controlling the thread, by what I have termed the friction-pad, between the seam and the bobbin, or any equivalent therefore, substantially as described, and for any or for all of the purposes specified. I also claim placing the bobbin from which the needle is supplied with thread, on an adjustable arm attached to the frame, substantially as described; when this is combined with the carrying of the said thread through an eye or guide, attached to and moving with the needle-carrier, as described, or the equivalent therefore; whereby any desired length of thread can be given for the formation of the loop, without varying the range of motion of the needle, as described. And I also claim in a sewing machine, feeding the cloth, or other substance, to determine the space between the stitches, by the friction of the surface of the periphery of

the feed wheel, or any equivalent 208 feeding surface, substantially as specified, in combination with a spring pressure pad, which gripes the cloth, or other substance, against such feeding surface, substantially as specified, and for the purpose set forth.”

The third count was upon letters patent granted to Isaac M. Singer April 13, 1852 [No. 8,876]. The claims of this patent were as follows: “First. The cut-off friction pad, constructed and operating substantially in the manner and for the purpose set forth. I also claim the construction and arrangement of the feeding apparatus, as above described.”

The fourth count was upon letters patent granted to Isaac M. Singer May 30, 1854, No. 10,075. The claims of this patent are as follows: “The method of imparting the feed motion to the feed-wheel a, by means of the cord connected at one end with the adjustable arm of the rock shaft j, and the other, with the reaction spring o, substantially as specified, when this is combined with the friction brake, operating substantially as specified and for the purpose set forth. Also, governing and regulating the tension of the needle thread by means of the wire g, with its eyes or guides, substantially as specified, in combination with the turning wing h, by which the coiling or winding of the thread around wire can be increased or decreased at pleasure, substantially as specified. Also, in the sewing of leather, causing the needle thread, on its way to the needle, to pass through linseed oil, or its equivalent; mixed with a dryer, substantially as and for the purpose specified.”

The fifth count was upon letters patent granted to Isaac M. Singer, May 30, 1854, No. 10,974. The claims of this patent were as follows: “The method of forming a seam with one thread, by carrying the thread through the cloth or material with the needle, and forming the thread into a loop, and at the next passage of the needle forming another loop, which

is drawn through the first, or previously-formed loop. Also, the employment of lateral pressure, whether by a cam, a lever, or their equivalents, to act against and in combination with the needle, at or near the end of its perforating motion, and to insure the proper position of the needle, as described. Also, in combination with a needle for perforating the substance to be sewed or stitched, and carrying the thread through it; a looping apparatus to form a loop at each perforation of the needle, and consecutively liberating the previously-formed loop over the one last formed, to effect the concatenation of the stitches, as described. Also, the looping apparatus, with a recess into which the thread is drawn to form a loop, or its equivalent, in combination with the lever, or its equivalent, for alternately opening the recess to receive the thread to form the loop, and closing it to shut in the last-formed loop, and discharging the previously-formed loop over the one last-formed. Also, giving a positive motion to the spring-arm guide, through which the thread passes from the tension apparatus to the needle, by combining therewith the two bridles, or their equivalents, and needle carrier, or some equivalent moving part of the machine, substantially as specified; the carrier forcing up the said spring-arm guide, to the limit governed by the fixed bridle, and the movable bridle forcing it down to make the slack as described. Also, the method of feeding the cloth, or other substance, to the needle for the progress of the seam, by means of the foot or pad, which holds it on the table, substantially as specified; by means of which the cloth, or other substance, can be turned on the needle as its axis while the needle is in it, and the foot or pad is lifted up preparatory to the feed motion, as set forth.”

The sixth count was upon letters patent granted to Isaac M. Singer, November 4, 1856 [No. 16,030]. The claims of this patent were as follows: “I claim operating the needle to give it the required reciprocating

motions, substantially such as described, by a crank pin or a roller on a rotating shaft, acting in a cam groove, substantially such as described, whereby the required motions are imparted to the needle with much less extent of motion of the crank pin, or roller, in the cam groove, and consequently less friction, than if the cam groove were on the shaft, and the pin, or roller, on the needle carrier, as described.”

W. J. O'Brien and J. H. B. Latrobe, for plaintiffs.

Brown & Brune, A. C. Washburn, and William Whiting, for defendant.

GILES, District Judge (charging jury). Probably of all species of property, this property in patent rights should be most carefully guarded and protected, because it is so easily assailed. If a man invades my farm, the act is patent and open; if he assails my person, it is an open act; if he assails my personal or real property, it is an act easily capable of proof; but the most difficult thing in the world is to prove an invasion of property of this character—property protected by patents. It is equally entitled to the protection of courts and juries with all other property of the citizen; it should be most carefully protected, from the difficulty of proving the invasion. Now, patents are not monopolies, as the counsel have all said, because a monopoly is that which segregates that which was common before, and gives it to one person or to a class, for use or profit; a patent is that which brings out from the realm of mind something that never existed before, and gives it to the country. And when we consider the priceless blessings which have accrued to our land, by the intellect and ingenuity of the country in this department, we feel almost lost in wonder at the vastness of the interests which have been created by the ingenuity of the country, 209 and the immense amount now invested, in this department of property.

But, gentlemen, when we come to the question of what is patentable and What is not, we go to the act of 1836 [5 Stat. 117]. The words of that act are: "Any person or persons having discovered or invented any new and useful art, machine, manufacture, or composition of matter—not known or used by others before his or their discovery or invention thereof, and not, at the time of his application for a patent, in public use or on sale, with his consent or allowance, as the inventor or discoverer, and who shall desire to obtain an exclusive property therein, may make application," etc. It seems, then, that whatever may be the extent of the terms of the grant under the constitution, the only power that congress has exercised is the power to give a patent for a "new and useful art, machine, manufacture, or composition of matter." I suppose we have here to do with a machine or manufacture, more properly with a machine, in this case. The law of England uses, I believe, the sole word, "manufacture"—"any new manufacture." We have, therefore, "machine or manufacture." I consider them tantamount, however; the English law is probably as broad as ours, and intended to be so. Now, my learned friend who argued that point very ably for the plaintiffs here, contended that, while he admitted a principle could not be patented, you could yet patent it indirectly—that is, that the principle was patented in the machine in which it was embodied. That is a very refined idea, and it requires a great deal of thought for us to comprehend it, and then to see it really and truly, and reconcile it with the decisions in this country upon this subject, and to see if even the decisions in the English courts, to which that learned counsel has referred, do carry out that idea of his, or whether they do not all go back to what I believe to be the true doctrine—that you can not patent a principle; you can not patent a result; you can not patent the function of an instrument; but you can

patent a machine or manufacture; and when you come to test the question of infringement, the question of principle comes up in this light—what is the mode of operation of the machine you have invented? Because if you find in the machine, which is alleged to be an infringement, the same mode of operation, it is substantially the same; and therefore, if the learned counsel uses the word “principle” to signify “mode of operation,” I can understand him. Now, the first case was the celebrated English case of the *Househill Coal & Iron Co. v. Neilson*, *Webst Pat Cas. 685*, and in that case, the learned judge says: “I state to you the law to be, that you may obtain a patent for a mode of carrying a principle into effect” That is it. A principle is not patentable; but if you discover a principle, and discover a mode of operation, you have a right to have your patent for the mode of carrying the principle into effect; and if anybody afterward comes along and takes your principle, and takes your mode of operation, substantially, although he varies the form, he is an infringer. That is what I understand to be the law.

The learned counsel referred to another case in the same book (pages 130 and 134). On page 130, the judge says: “The essence of the claim to invention, and undoubtedly his claim, is the application of a self-adjusting leverage to the chair, and if it could be shown that any self-adjusting leverage had been, before the plaintiff’s patent, applied to a chair, the patent would be void, because the priority of the specification given by him would claim every species of the application of a self-adjusting leverage to the back and seat of a chair (the claim was not for any particular form of self-adjusting leverage); he would have claimed, not the particular way of accomplishing the particular purpose by the particular engine, but he would have claimed too much, because he would have claimed the application of such self-adjusting leverage to the back and seat of a chair. Now it is for you to

say, whether you are satisfied that the species of self-adjusting leverage has ever been applied to the back and seat of a chair before." In other words, the court called upon the jury there to say whether this principle was new; because, if it was, then the party had a right to a patent for his self-adjusting leverage, no matter in what form, provided it was a self-adjusting leverage, performing that function.

The next case, I believe, was the leading case of *Neilson v. Harford*, on pages 342 and 371 of the same book. This is the case in which the learned counsel read from Baron Alderson's opinion; and on page 371, I understand the court to decide that this patent was a patent for a machine. The court say: "It is very difficult to distinguish it from the specification of a patent" for a principle, and this at first created in the minds of the court much difficulty; but after full consideration, we think that the plaintiff does not merely claim a principle, but a machine embodying a principle, and a very valuable one." We think the case must be considered as if, the principle being well known, the plaintiff had first invented a mode of applying it by a mechanical apparatus to furnaces; and his invention then consists in this: by interposing a receptacle for heated air between the blowing apparatus and the furnace. In this receptacle, he directs the air to be heated by the application of heat externally to the receptacle, and thus he accomplishes the object of applying the blast, which was before of cold air, in a heated state to the furnace.

It was on the ground, then, that the patent was for the invention of a mechanism, that the court maintained the patent; otherwise 210 they would have declared the patent void. If the claim had been for the principle that hot air would fuse iron quicker than cold air blown into the oven and there heated, without any claim for machinery, the patent would have been declared void. But they admitted it to be

valid, because they construed it to be a patent for a machine. You will find that doctrine all gone over very elaborately, in the case of *Boulton v. Bull*, 2 H. Bl. 463. You will find there the same doctrine laid down, that you can not patent a principle, but you can patent a machine; which, in its mode of operation, carries out, and embodies a principle; and when you come to test the question of infringement, if the principle is new, and the mode of operation by a certain machinery is new, then you have a right to be protected thus far; that is, any one who makes a machine which embodies that principle, and operates in the same mode that you do, although the form may be different, is an infringer.

The learned counsel referred also to Norman on Patents. I read one passage from that work in support of the view I take upon the subject. The author, on page 134, says: "When the principle of operation is public, a patent for a particular machine is not necessarily infringed by the adoption of instruments operating on the same principle, but varying in detail from those employed in the patented machine. In such case, the similarity of effect produced does not necessarily show that one instrument is merely an equivalent for the other."

I read this to show, that if a party is not the original inventor of the principle, as well as of the machine, he has no right to invoke the doctrine of equivalents, for it does not belong to him; but if he is the inventor of the principle which he embodies in his machine, as well as the first inventor of the machine which carries it out, he has a right to invoke the doctrine of equivalents. Now, what is the view of the American authorities upon this subject? And in this view of the English authorities, I reconcile them with the American authorities. The first one is the case of *Leroy v. Tatham*, 14 How. [55 U. S. 156]. I commence on the bottom of page 174:

“The word ‘principle’ is used by elementary writers on patent subjects, and sometimes in adjudications of courts with such a want of precision in its application as to mislead. A principle in the abstract is a fundamental truth; an original cause; a motive; these can not be patented, as no one can claim in either of them an exclusive right. Nor can an exclusive right exist to a new power, should one be discovered to exist in addition to those already known. That is the doctrine of *O’Reilly v. Horse* [15 How. (56 U. S.) 62]. Through the agency of machinery, a new steam power may be said to have been generated. But no one can appropriate this power exclusively to himself under the patent law. The same may be said of electricity, and of any other power in nature, which is alike open to all, and may be applied to useful purposes by the use of machinery.

“In all such cases, the processes used to extract, modify, and concentrate natural agencies, constitute the invention. The elements of the power exist; the invention is not in discovering them, but in applying them to useful objects. Whether the machinery used be novel, or consist of a new combination of parts known, the right of the inventor is secured against all those who use the same mechanical power, or one that shall be substantially the same. A patent is not good for an effect, or the result of a certain process, as that would prohibit all other persons from making the same thing by any means whatever. This, by creating monopolies, would discourage arts and man factures against the avowed policy of the patent laws.

“A new property discovered in matter, when practically applied in the construction of a useful article of commerce or manufacture, is patentable; but the process through which the new property is developed and applied must be stated with such precision as to enable an ordinary mechanic to construct, and apply the necessary process. This is

required by the patent laws of England and of the United States.”

Then we go to the case of *O’Reilly v. Morse*, 15 How. [56 U. S.] 62. What was the eighth claim of the patentee which the court was called upon to construe, and which the court declared to be void? It was as follows: “I do not propose to limit myself to the specific machinery or parts of machinery described in my foregoing specification and claims; the essence of my invention being the use of the motive power of the electric or galvanic current, which I call electro-magnetism, however developed, for marking or printing intelligible characters, signs, or letters, at any distances, being a new application of that power of which I claim to be the first inventor or discoverer.” Id. 112.

“It is impossible,” says the court, “to misunderstand the extent of this claim. He claims the exclusive right to every improvement where the entire power is the electric or galvanic current, and the result is the marking or printing intelligible characters, signs, or letters at a distance.”

“If this claim can be maintained, it matters not by what process or machinery the result is accomplished. For aught that we know now, some future inventor in the march of science may discover a mode of writing or printing at a distance, by means of the electric or galvanic current, without using any part of the process or combination, set forth in the plaintiff’s specification. His invention may be less complicated—less liable to get out of order—less expensive in construction and in its operation; but yet, if it is covered by this patent, the inventor could 211 not use it, nor the public have the benefit of it without the permission of this patentee.

“Nor is this all; while he shuts the door against the inventions of other persons, the patentee would be able to avail himself of new discoveries, in the properties and powers of electro-magnetism, which

scientific men might bring to light. For he says he does not confine his claim to the machinery or parts of machinery which he specifies, but claims for himself a monopoly in its use, however developed, for the purpose of printing at a distance.”

Then the court go on to argue the question, coming to the conclusion that the claim can not, of course, be allowed; and then refer to the case of Neilson v. Harford [supra], quoting the opinion of Baron Parke, already referred to, and to the case of Leroy v. Tat-ham [supra], as confirming their opinion. The court say in [O'Reilly v. Morse] 15 How. [56 U. S.] 119, at the bottom :

“If the eighth claim of the patentee can be maintained, there was no necessity for any specification, further than to say that he had discovered that, by using the motive power of electromagnetism, he could print intelligible characters at any distances. We presume it will be admitted on all hands that no patent could have issued on such a specification. Yet this claim can derive no aid from the specification filed. It is outside of it, and the patentee claims beyond it. And if it stands, it must stand simply on the ground that the broad terms above mentioned, were a sufficient description, and entitled him to a patent in terms equally broad. In our judgment, the act of congress can not be so construed.

“The patent, then, being illegal and void, so far as respects the eighth claim, the question arises whether the whole patent is void”—and then the case is discussed upon another point.

Now, that case has never been overruled, but I think that its principles have been again and again recognized and confirmed. I can find no case that has been decided by the supreme court where they have ever carried the doctrine of inventions beyond the point I have indicated.

The next case referred to is the case of *Corning v. Burden*, 15 How. [56 U. S.] 268. In that case, a question was raised in regard to the construction of the specification; and there the court announce the doctrine, which I may as well incidentally notice here, that the courts should liberally construe patents, and they have always done so. They have always adopted the construction most favorable to the patentee, “Ut res magis valeat, quam pereat.”

Where there was anything inconsistent either in the specification, or in the claim, and yet the patent claimed in substance that which was patentable, the courts have always decided that that was the meaning of the claim. As, for instance, in one case where a party described a machine, and yet claimed a function, the court decided there, that the patent was good for a machine. But, the courts have never gone so far, I think, upon that principle of the liberal construction of patents, nor could they have done so, as to say that a party having claimed that which was not patentable, his patent could stand. The court say, in this case of *Corning v. Burden*, at the bottom of page 269:

“The party can not describe a machine which will perform a certain function, and then claim the function itself and all other machines that may be invented to perform the same function.” There is another case in this same book, the celebrated case of *Winans v. Denmead*, 15 How. [56 U. S.] 330, upon which great reliance has been placed by the learned counsel for the plaintiff. Now, it is necessary to look at this case of *Winans v. Denmead*, very attentively, to see what was decided, or meant to be decided by the supreme court. As I understand that case, it does not at all conflict with the principles laid down in *O’Reilly v. Morse*, *Corning v. Burden* [supra], or any of the previous decisions in the circuit courts, of which I have examined a great many, but which I will not take the time to read. They are *Blanchard v. Sprague* [Case

No. 1,518]; *Whittemore v. Cutter* [Id. No. 17,601]; *Odiorm v. Winkley* [Id. No. 10,432]; *Stone v. Sprague* [Id. No. 13,487]; *McCormick v. Manny* [Id. 8,724].

I do not understand it as overruling the doctrine in the case of *O'Reilly v. Morse*, but the court are declaring the rules by which you are to be guided on the question of infringement: and they say at the bottom of page 338: "In this, as in most patent cases, founded on alleged improvements in machines, in order to determine what is the thing patented, it is necessary to inquire: First. What is the structure or device, described by the patentee as embodying his invention? Second. What mode of operation is introduced or employed by the structure or device? Third. What result is attained by means of this mode of operation? Fourth. Does the specification of claim cover the described mode of operation by which the result is attained?"

Now in that patent, Winans claimed that by making his car of a conical shape, with a sliding drop, he made the car sustain itself, and got rid of all the heavy trestle-work around the square-bodied car and therefore by getting rid of probably one-half the weight of the ordinary square car, supported by a square frame, he was enabled to carry, with the same motive power, twice as large a load. Let us see what his claim was.

"What I claim as my invention, and desire to secure by letters patent, is making the body of a car for the transportation of coal, etc., in the form of a frustrum of a cone, substantially as herein described, whereby the force exerted by the weight of the load presses equally in all directions, and does not tend to change the form thereof so that every part thereof resists its equal proportion, ²¹² and by which also the lower part is so reduced."

Well, the supreme court say: "The court ruled below, that the claim was limited to the particular

geometrical form mentioned in the specification; and as the defendants had not made cars in that particular form, there could be no infringement, even if the cars made by defendants attained the same result by employing what was in fact the same mode of operation, as that described by the patentee. We think this ruling was erroneous. * * * Merely to change the form of a machine is the work of a constructor, not of an inventor; nor does the plaintiff's patent rest upon such a change. To change the form of an existing machine, and by means of such a change to introduce and employ other mechanical principles or natural powers, or as it is termed, a new mode of operation, and thus attain a new and useful result, is the subject of a patent."

Recollect that the court are dealing here, in this opinion, with Winans' invention, which, by a new form of machinery, attained a new and useful result. They were both new: the result was new, and the form in which he embodied his machinery was new. "Its substance," the court go on to say, "is a new mode of operation, by means of which a new result is obtained. It is this new mode of operation which gives it the character of an invention, and entitles the inventor to a patent; and this new mode of operation is, in view of the patent law, the thing entitled to protection. The patentee may, and should, so frame his specification of claim as to cover this new mode of operation which he has invented, and the only question in this case is whether he has done so; or whether he has restricted his claim to one particular geometrical form. There being evidence in the case to show that other forms do in fact embody the plaintiff's mode of operation, and, by means of it, produce the same new and useful results, the question is whether the patentee has limited his claim to one out of the several forms which thus embody his invention."

Now, while it is undoubtedly true, that the patentee may so restrict his claim as to cover less than what he invented, or may limit it to one particular form of machine, excluding all other forms, though they also embody his invention, yet such an interpretation should not be put upon his claim, if it can fairly be construed otherwise, and this for two reasons: “1st. Because the reasonable presumption is, that, having a just right to cover and protect his whole invention, he intended to do so. 2d. Because specifications are to be construed liberally, in accordance with the design of the constitution, and the patent laws of the United States, to promote the progress of the useful arts, and to allow inventors to retain to their own use, not anything which is matter of common right, but what they themselves have created.”

The court say at the top of page 343, after reasoning upon the subject-matter of infringement: “The answer is, my improvement did not consist in a change of form, but in the new employment of principles or powers, in a new mode of operation, embodied in a form by means of which a new or better result is produced; it was this which constituted my invention; this you have copied, changing only the form; and that answer is justly applicable to this patent.”

I understand, therefore, in that case, the court to give the opinion, that where a party has discovered a result, as well as the machinery which produces it, he has a right to invoke the doctrine of equivalents in reference to infringers. Where he discovered a function that is new, for the first time, and discovers a machine that is new, too, he has a right to invoke the doctrine of equivalents to protect himself. And that reconciles that case with the case of *McCormick v. Talcott*, 20 How. [61 U. S.] 402. McCormick was the inventor of a certain divider, which was attached to a reaping machine. But he was not the first, for dividers had been used before; and he therefore made nothing

but in improvement in the divider. Its functions had been performed, in some way or other (not so well) by devices before invented by others; and Many, who came after him, invents an improvement upon McCormick, adopting very much one of the previous inventions, and was sued by McCormick, who undertook to bring to his aid the doctrine of equivalents. Now, what did the court say? "If he be the original inventor of the device or machine called the divider, he will have a right to treat as infringers all who make dividers 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. 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 can not 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 can not invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first."

There they are carrying out and sustaining the idea which they announce in *Winans v. Denmead* [supra], that where the party is the first inventor of a divider, he has a right to treat all as infringers who make dividers operating upon the same principle, and performing the same function, even although he may use mechanical equivalents; but where he is only the original inventor of a device, he can only recover against an infringer, if he shows that he has substantially copied his invention. In other words, being an improver 213 himself, he can not invoke the doctrine of equivalents to protect him. I will not go over the cases in the circuit courts.

These are the views which I hold, gentlemen, in reference to the question of the doctrine of equivalents.

The next question that comes up here is the question of the infringement of a combination of mechanism. I suppose there can be no difference between counsel upon that subject. In *Prouty v. Ruggles*, 16 Pet. [41 U. S.] 336, the views of the court were very clearly announced upon that subject in the celebrated center-draft plow case.

“The patent is for a combination,” says the chief justice, on page 341, “and the improvement consists in arranging different portions of the plow, and combining them together 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. And this combination, composed of all the parts mentioned in the specification, and arranged with reference to each other, and to other parts of the plow in the manner therein described, is stated to be the improvement, and is the thing patented.” (As it is here in four of these patents.) “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.”

Now there is import and meaning in every sentence here. If the three elements are the same, but are not connected and arranged the same, it is no infringement; or if there are two of the three elements, and the third element is new, it is not the same combination; it is not the same combination if it is substantially different from it in any of its parts, and

that case of *Prouty v. Ruggles* [supra], you will find sustained in [*Stimpson v. Baltimore & S. It. Co.*] 10 How. [51 U. S.] 329.

It is the case which has been referred to here several times of *Stimpson v. Baltimore & S. R. Co.*, in which the court quote from *Prouty v. Ruggles*, and sustain the doctrine laid down in that case. You will find the opinion of the court on this subject on page 345, in reference to turning the corners of a street with a railroad.

Now another question comes up here in regard to the fourth and fifth claims in the first patent; for, although these claims have not been relied upon in the suit as the foundation of this action, or any part of it, yet, as they come before the court upon the prayers, and affect the validity of the patent, it will be necessary to consider them.

The proposition on the part of the counsel for the defendants is, that if these claims should be found to be for inventions that were not new, and as no disclaimer has been filed, they render void the whole patent. That is the proposition. Now, I do not understand the law to be so. A party may take out a patent for three or four claims, and, as I understand the law, if he acts in perfect good faith, if he believes himself to be the inventor, and inadvertently, by accident or mistake, without any willful intent to defraud, he embraces in his claim more than he is entitled to, in other words, claims things which are not new, it does not render his patent void; he is enabled to bring his suit under sections 7 and 9 of the statute of 1837 [5 Stat. 191], without first making any disclaimer. His patent is good for what is new and original.

Section 9 is as follows: "That whenever by mistake, accident, or inadvertence, and without any willful default, or intent to defraud or mislead the public, any patentee shall have, in his specification, claimed

to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the first and original inventor, and shall have no legal or just right to claim the same, in every such case the patent shall be deemed good and valid for just so much of the discovery as shall be truly and bona fide his own; provided, it shall be a material and substantial part of the thing patented, and be definitely distinguishable from the other parts so claimed, without right as aforesaid. But in every such case in which a judgment or verdict shall be rendered for the plaintiff, he shall not be entitled to recover costs against the defendant, unless he shall have entered at the patent office, prior to the commencement of the suit, a disclaimer of all that part of the thing patented which was so claimed without right; provided, however, that no person bringing any such suit shall be entitled to the benefits of the provision contained in this section, who shall have unreasonably neglected or delayed to enter at the patent office a disclaimer as aforesaid.”

“What is unreasonable delay,” is a question to be settled by the court,—and not for the jury. The court can not, therefore, say, that without the party knew that this claim was false, if he believed (and we take his oath as prima facie evidence of that), if he believed that he was the sole inventor of that which he claimed (because the law never makes so harsh a presumption as that a man perjures himself—the presumption is that a man respects his oath), the court will find that the time, in reference to the question of delay, commences when the knowledge was brought home to the party that he was not the first inventor, or when it is declared by a court, of competent jurisdiction to settle the question, that he was not the first inventor; then it is that the time commences to run, and not until then. [O’Reilly v. Morse] 15 How. [56 U. S.] 121;

214 [Seymour v. McCormick] 19 How. [60 U. S.] 96;
[Silsby v. Foote] 20 How. [61 U. S.] 388.

The only other point to which I shall refer, for I am taking up more time than I intended, is the question of prior invention. What is the character of a prior invention which is to defeat a subsequent patent? This case came before one of the circuit courts in the case of Alden v. Dewey [Case No. 153]; also in Goodyear v. Day [Id. No. 5,569], a case, I suppose, that occupied as much attention, and was as ably argued as any patent case that has ever been tried in this or any other country. I will read from this last case:

“The testimony shows that many persons had made experiments, that they had used sulphur, lead, and heat, before Goodyear’s patent, and probably before his discovery. But to what purpose? Their experiments ended in discovering nothing, except, perhaps, that they had ruined themselves. The great difference between them and Goodyear is, that he persisted in his experiments and finally succeeded in perfecting a valuable discovery, and they failed.

“It is usually the case, when any valuable discovery is made, or any new machine of great utility has been invented, that the attention of the public has been turned to that subject previously; and that many persons have been making researches and experiments. Philosophers and mechanics may have, in some measure, anticipated, in their speculations, the possibility or probability of such discovery or invention; many experiments may have been unsuccessfully tried, coming very near, yet falling short of the desired result. They have produced nothing beneficial. The invention, when perfected, may truly be said to be the culminating of many experiments, not only by the inventor, but by many others, and he may have profited indirectly by the unsuccessful experiments and failures of others; but it gives them no right to claim a share of the honor or the profit

of the successful inventor. 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 cautious 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.”

So I say in reference to this case, it does not matter how many experiments have been tried by different inventors, if they failed, if their experiments were never perfected, if they were never brought into use—and by that, I do not mean general use, but to perform the functions of the plaintiff’s machine or any of the perfected machines of this day—if they rested in experiment alone, they were not of such a character as to deprive subsequent inventors of the benefit of their inventions, if they brought them into use. The man who brings his invention before the country, and into actual use, is the one to be protected, for he is the one who confers a benefit upon the country.

Judge Grier says in the case last referred to: “Yet when genius and patient perseverance have at length succeeded, in spite of sneers and scoffs, in perfecting some valuable invention or discovery, how seldom is it followed by reward! Envy robs him of the honor, while speculators, swindlers, and pirates rob him of the profits. Every unsuccessful experimenter, who did, or did not come very near making the discovery, now claims it Every one who can invent an improvement, or vary its form, claims a right to pirate the original discovery. We need not summon Horse, or Blanchard, or Wood-worth, to prove that this is the usual history of every grand discovery or invention.”

And another point comes up in connection with use. What is meant by use? “Has been in use before,” “has been known and in use before.” Such is the language of the patent law in reference to machines.

In *Treadwell v. Bladen* [Case No. 14,154], the objection to the patent was, that Treadwell was not the original inventor of the machine, but that it was invented by one Christian, anterior to the patent of Trendwell. In this case, Judge Washington says:

“But the point mainly relied upon by the plaintiff’s counsel is, that no evidence is given that Christian’s machine was ever used within the true meaning of that expression in the patent act. It is admitted that an experiment was made with it, but this, it is urged, was not such a using as the act intends. It surely can not be denied that the act of making crackers with it amounted to a using of it according to the common and accepted meaning of that phrase; and I am quite at a loss to imagine how this meaning can be varied by the particular motive which induced the inventor so to employ the machine. I can discover nothing in the patent act which will authorize the court to depart from the ordinary meaning of this expression, and to declare that a machine that is put into operation for the sole purpose, if such be the case, of trying its practical utility, is not within the meaning and intent of the sixth section of that act. The plaintiff’s counsel relied in some measure upon certain expressions of the judges in the two cases of *Boulton v. Bull*, 2 H. Bl. 463, and *Bedford v. Hunt* [Case No. 1,217]. But so far as any satisfactory inference can be drawn from those expressions, in its application to the particular point under consideration, it strikes me to be unfavorable to the construction contended for. They manifestly contrast the confining of the invention to the closet of the inventor, and a mere speculative invention, with putting it into use, practice, or operation, and not the putting of it in practice for the purpose of experiment, with any ²¹⁵ other purpose whatever. Upon the whole, I am of opinion that the experiment of this machine made by Christian, in the year 1807, amounted to a

using of it within the true meaning of the sixth section of the patent act.”

I read also from the case in another connection, to show that if the plaintiff in this case took the same idea that he found embodied in a ruling machine, he is not entitled to a patent, because, if the principle of gripping the material along the surface was known and in use, though motion was given by the hand, the change to automatic machines makes no difference. The same learned judge says, on page 582: “That Christian’s machine was invented many years prior to Treadwell’s, is proved by uncontradicted testimony, and is not denied by the plaintiffs’ counsel. That it possesses all the essential parts and principles of Treadwell’s machine, the cutters, piercers, and clearers, is manifest by comparing the two together; besides which, the fact is proved by all the witnesses. Used with no other than hand power, it is proved, and admitted not to answer the purpose of a labor-saving machine.” Christian made this machine, used it for a short time, and then threw it away.

So too, these sewing machines may be used, and be thrown away afterward; but if they are perfected so as to accomplish the functions claimed for them, they have been in use, within the meaning of the patent act.

One other point, and I shall pass to my instructions. The learned counsel for the plaintiffs relied upon a case in Story’s Reports, in reference to the oath on the application of the plaintiff here—to this oath of originality, and the testimony of Mr. O. C. Pheips. He said that as you had oath against oath, the patent stood, and was conclusive in favor of the patentee, and cited *Alden v. Dewey* [Case No. 133]. All that Judge Story decided there, is what I have decided here upon the plaintiffs’ patents—that they are prima facie evidence to go before the jury; the jury are to judge what weight they will give to them. Judge Story instructed the jury “that the original patentee had sworn that he was the

true and first inventor of the improvement for which he had taken out letters patent; that this oath was required by law, prior to the issue of letters patent," nothing further; and he left the question of the oath, and its force, to the jury. It was prima facie evidence, and the jury were to judge of its effect, in connection with other evidence in the case.

The plaintiff's patent of October 3, 1854, claims four inventions. In the first claim, as I construe it, I understand the patentee to claim the invention of a combination of certain mechanism which he describes, by which a slight additional forward movement is given to the shuttle, after the needle has been drawn out of the cloth, with the feed motion of the cloth, in the reverse direction, and the final upward movement of the needle; by means of which three pulls are given simultaneously to tighten the stitch. It is not a patent for the result obtained, because that is not patentable, but for the particular combination of mechanism which produces that result.

The second claim in said patent of October 3, 1854, is for the invention of a friction-pad placed between the seam and the bobbin, which makes a slight pressure on the thread, so that as the needle descends, to prevent the formation of a loop above the cloth, liable to be caught or cut by the needle, while at the same time, the pressure is not sufficient to prevent the needle from drawing the thread through the cloth, to make the loop below it, nor is there any tendency when the needle rises, to draw out such loop.

In the third claim, which is not relied upon by the plaintiffs in this suit, but which comes into consideration in reference to the validity of the patent, I understand the patentee to claim the invention of a combination of an adjustable arm, on which the bobbin is placed, and which is attached to the frame, with an eye or guide, attached to and moving with the needle-carrier, through which eye the thread passes

from the bobbin to the needle, so that by changing the angle of the said arm, any desired length of thread can be given to the formation of the loop; and in the fourth claim, I understand the patentee to claim the invention of the combination (for feeding the cloth) of the friction of the surface of the periphery of the feed-wheel with spring pressure plate or pad, which grips the cloth or substance to be sewed, against the feeding surface; the surface of the said feed-wheel having a fine thread or parallel groove cut thereon, to enable it to perform its office in combination with the pressure-plate, instead of being armed with pins.

In the patent of April 13, 1852, the patentee claims the invention of an improvement in the friction-pad, whereby the thread is saved from the chafing it would otherwise be liable to by substituting for it what he terms a cut-off friction-pad, which alternately seizes and releases the thread at proper intervals; so as to cause the pad to press upon the thread when required, and then to be released while the needle is passing through the cloth.

In his patent of May 30, 1854, the patentee claims the invention of a wire with eyes or guides, in combination with a turning-wing, to regulate the tension of the needle-thread.

In his fourth patent of the same date as the last one, to wit, May 30, 1854, the patentee claims the invention of the combination of the following mechanical devices, viz.: First: A spring-arm guide, through which the thread passes from the tension apparatus to the needle. Second: The needle 216 carrier, forcing up the spring-arm guide to the limit fixed for it. Third: A fixed bridle, limiting the upward movement of the spring-arm guide; and Fourth: A movable bridle attached to the needle-carrier, or some other part of the machine having an equivalent motion to act on, to force down the said guide, to give the required amount of slack thread for the formation of the loop;

the carrier forcing up the said spring-arm guide to the limit governed by the fixed bridle, and the movable bridle forcing it down again, to make the slack thread, when required; these motions being claimed to be independent of the thread, or any contingency affecting it. In the last patent, dated November 4, 1856, I understand the patentee to claim, in his second claim, the invention of the combination of a horizontal table, with the apparatus for feeding the cloth; the operative part of the feed-wheel, projecting through the table, and the surface of the table surrounding that part of the feeding surface which is active for the time being, so that such feeding surface may act on a portion of the under surface of the material to be sewed, to give the required feeding motion to space the stitches, while the table answers the purpose of stripping the said material from the surface of the feed-wheel, and to cover and protect the mechanism which operates the feeder.

In the third claim, I understand the patentee to claim the invention of imparting the feeding motion to the feed-wheel for spacing the stitches by gripping the periphery thereof by a gripping lever, in contradistinction to the action of a pawl or hand catching on to ratchet teeth, whereby the extent of feeding motion may be adjusted and varied to any degree, instead of being restricted by the size of the ratchet teeth.

And in the fourth claim, I understand him to claim the invention of a combination of a feeder with a presser, attached to a slide, which keeps the plane of its under surface always in the same relation to the plane of the table, whether the material to be sewed be thick or thin, thereby avoiding the inequality of pressure which takes place when the presser is on an arm connected with the table or with the frame by a fulcrum or hinge-joint.

First. Having briefly stated what I understand to be the inventions claimed by Mr. Singer, in these patents, the first duty of the jury will be to inquire if the defendants in the construction of their sewing machines, have used substantially the same mechanism or combination of mechanism, to produce the same results; or, in other words, whether the machines of the defendants are substantially the same in principle and mode of operation with the plaintiff's sewing machines, in these particulars; for, if they shall find, that the controlling the thread, that is, the keeping it tight until the needle was about to enter the cloth, and then releasing is so that a loop might be formed for the shuttle to pass through, the feeding of the cloth and the tightening of the stitch, were necessities in automatic sewing machines, which have been provided for by various devices before the said inventions of the said plaintiff Singer, then if the jury shall find that the said defendants, in the construction of their machines, have provided for said necessities by mechanism or combinations of mechanism, substantially different from the mechanism or combination of mechanism described in the patent or patents of the said Singer, then there is no infringement of the said patent or patents.

Second. Or, if the jury shall find that in reference to the plaintiffs' first, third, fourth and fifth patents, which claim the invention of combinations of certain mechanism to produce certain results, the defendants use only one or two of the mechanical devices described by the plaintiffs, or two combined with a third, which is substantially different in form or in the manner of its arrangement or connection with the others, there is then no infringement of plaintiffs' said patents; for the two combinations are not the same if they substantially differ from each other in any of their parts.

Third. Or, if the jury shall find that in any or all of the patents of the said plaintiffs, the specifications are not in such full, clear and exact terms as to enable any one skilled in the art of making sewing machines to construct and use the sewing machine, or device therein described, without experiments of his own, then such patent or patents, so far as that specification and claim is concerned, is or are void, and no recovery can be had thereon.

In examining the question the jury are to look at the drawings as well as to the specifications, for they are a part of the description of the thing patented; also to the state of the art at the time of the invention, and the knowledge of previous improvements in sewing machines which were then in general use.

But if, from the specifications and drawings taken as a whole, any person skilled as aforesaid, could construct and use the sewing machine or device therein described, without invention of his own, which would attain the result claimed for it in the said patent, then the said patent is good, although there may be a mistake in describing the action of some part of the machinery but which mistake could be easily discovered by the mechanic when he came to examine the same.

Fourth. Or if the jury shall find that the invention or inventions claimed by the said plaintiff (Singer) in any or all of said patents, as new and original with himself, had been known and used in this country before their discovery by the said plaintiff, to accomplish the same results, or that before such discovery by plaintiff, the same had 217 been patented in Great Britain, then the said patent or patents is or are void, and no recovery can be had thereon.

And in examining this question, the jury, in order to ascertain what had been previously invented, have the right to look, not only to the machines offered in evidence by the defendants, but to the specifications

in the patent office, to drawings and models filed to describe and illustrate the invention claimed in the several prior patents, and in determining whether there has been a prior invention sufficient to invalidate any one of the said patents of the plaintiffs, it is not enough that another person should have conceived the idea of effecting what the patentee actually accomplished; for the law is, that whoever first perfects a machine and brings it into useful operation, is entitled to the patent and is the real inventor, although others may previously have had the idea, and made some experiments toward putting it in practice.

Fifth. But if the jury shall find that the results attained by the mechanism or combinations of mechanism described in the patent or patents of the said plaintiffs were new and useful, and that the said Singer was the first and original inventor of the said mechanical devices or combination of mechanism which produced the same; and shall further find that the defendants, in the construction of their sewing machines, use a mechanism or combination of mechanism substantially the same as that described in all or any of the said patents of the said plaintiffs, and to accomplish the same results; and that the mechanism or combination of mechanism used by defendants varies from that described in plaintiffs' patents only in immaterial respects, or by the substitution of other known equivalent mechanical powers for those mentioned in plaintiffs' specification, then the defendants have infringed the patent or patents of the said plaintiffs, if the jury shall find them to have used the same without the license or consent of the said plaintiffs—and that in comparing the machines of the defendants with the inventions of the plaintiff, the mere change in the form of machinery, or an alteration of some one of its unessential parts, or in the use of known equivalent powers, not varying essentially, the machine or device, or its mode of

operation or organization, will not make the defendant's machine or device a new invention.

Sixth. And if the jury shall find that any or all of the inventions claimed by the said plaintiffs in the said patents was or were new and original with them; and that the specifications in the said patent or patents are in such full, clear, and exact terms as to enable any one skilled in such machinery to make and use the sewing machine or device therein described, without invention of his own; and shall further find that any or all of the same have been substantially used by the said defendants in the construction of their sewing machines, without the license or consent of the said plaintiffs, then the said plaintiffs are entitled to recover in this action—on the patent or patents that the jury may find to have been infringed.

And that the jury, under this instruction, in examining the question of infringement by the defendants by the construction of their sewing machines, will be guided by the rules which I have stated in the fifth instruction.

And in order to find for the plaintiffs, in any one of the patents that have been offered in evidence, it is not necessary that the jury should find that the defendants have infringed all the claims, if there be more than one in the particular patent, but it is sufficient if any one of such claims have been infringed by them.

Seventh. The patents offered in evidence by the plaintiffs, are prima facie evidence that Isaac M. Singer was the first and original inventor of the various improvements described in the specifications attached to and forming part of said patents; and the burden of proving the contrary is upon the defendants; and that in reference to the patent of November 4, 1856, the date of the application for such patent must be taken to be the 18th of October, 1850, the date of the original application, because it appears from the record from the patent office, that the same never was withdrawn,

and abandoned by the said Singer, by a written notice to that effect, filed in the patent office, or in any other way.

Eighth. If the jury shall find, that the said third and fourth claims made by the patentee, Singer, in his patent of October 3, 1854, were for inventions not new and original with him, yet, if they shall find that they were included in the specification of said patent by mistake, accident, or inadvertence, and without any willful default or intent to defraud or mislead the public; in this case the said patent is good and valid for so much of the invention or discovery described in the specification as the jury shall find to be truly and bona fide the invention or discovery of the said patentee.

But as no disclaimer has been entered in the patent office before this suit was brought, if the jury shall find for the plaintiffs on this instruction, and for the reasons therein set forth, they can not recover costs against the defendants on this count, although the infringement should be proved.

But if the jury find, that when Singer applied for his reissued patent of October 3, 1854, he well knew that he was not the first inventor of the invention mentioned in the third and fourth claims in said patent, or either of them, then the said patent is void, and no recovery can be had thereon.

Ninth. If the jury find that the devices used by the defendants in the construction of 218 their sewing machines, are the same which have been patented to William C. Hicks, by letters patent, dated November 8, 1859, and no interference was declared by the patent office between said Hicks and Singer; or that the result of the mechanism used by the defendants is greatly superior to that described and claimed in the patent or patents of the plaintiffs, these facts may be considered by the jury as tending to prove that the mechanism or device used by the defendants is a new

invention, substantially different from that described in the patent or patents of the plaintiffs; to be considered, however, in connection with all the other evidence upon the subject of infringement.

Tenth. If the jury shall find that the plaintiff, Singer, had surreptitiously or unjustly obtained a patent for that which was in fact invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same, such patent is void—or if the jury shall find that prior to the alleged invention by Singer, of the combination of the spring arm guide with the two bridles and the needle-carrier, the same combination, or substantially the same, had been invented and described by Walter Hunt, in a written deposition, in terms sufficient to enable a mechanic skilled in making sewing machines, at that time, to construct the said improvement without invention of his own; and that such invention and description was well known to the said Singer when he applied for the said patent, the said patent is void, and no recovery can be had thereon.

The jury found a verdict for the defendant.

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