

Syllabus.

ment from the time it shall be entered until it shall be paid, and for the costs and charges of the plaintiffs in the Circuit Court.

The costs of this court, of the plaintiffs in error and the defendant in error shall be paid, one-half of them by the plaintiffs in error and the other half by the defendant in error.

LOVELL MANUFACTURING COMPANY v. CARY.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR
THE WESTERN DISTRICT OF PENNSYLVANIA.

No. 110. Argued January 17, 18, 1893. — Decided March 6, 1893.

Letters patent No. 116,266, granted to Alanson Cary, as inventor, June 27, 1871, for an improvement in modes of tempering springs, are invalid, in view of the state of the art, for want of patentable invention.

The invention appears, from the specification, to be a method of restoring steel wire which has been mechanically strained, by subjecting it to a temperature of 600°, more or less, and the claim limits the method to its application to "furniture or other coiled springs;" but the process, as applied to those springs, was not different, in method or effect, from the same process when applied to any mechanically strained wire, or to steel made in straight pieces or strips, or otherwise.

The invention was anticipated by the prior use of New England wire clock-bells and of blued hair springs, used in marine clocks. The treatment to which those articles were subjected was in all respects the same in the prior use, as in the patented process.

It does not amount to invention to discover that an old process is better in its results, when applied to a new working, than would have been expected, the difference between its prior working and the new working being only one of degree and not one of kind.

There was nothing more than mechanical skill in arriving at the alleged invention, in view of the state of the art.

The point considered that no one had used the former processes for the manufacture of furniture springs, and that as soon as Cary's process was made known, the art of making furniture springs was revolutionized.

The cases in this court on the subject of double use, considered as to whether it is a patentable invention to apply old and well-known devices and processes to new uses, in other and analogous arts.

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THE case is stated in the opinion.

Mr. W. Bakewell and *Mr. Thomas W. Bakewell* for appellant. *Mr. James K. Bakewell* and *Mr. J. K. Hallock* were also on the brief.

Mr. William H. Kenyon for appellees. *Mr. W. C. Witter* was with him on the brief.

MR. JUSTICE BLATCHFORD delivered the opinion of the court.

This is a suit in equity, brought March 14, 1885, in the Circuit Court of the United States for the Western District of Pennsylvania, by Alanson Cary and Edward A. Moen against the Lovell Manufacturing Company, Limited, an association under the laws of the State of Pennsylvania, to recover for the alleged infringement of letters patent No. 116,266, granted to Alanson Cary, June 27, 1871, for an improvement in modes of tempering springs.

The specification of the patent is as follows: "Be it known that I, Alanson Cary, of city, county, and State of New York, have invented a new and useful improvement in furniture springs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same. This invention relates to spiral springs, usually made in a conical form, of steel wire, and extensively used in upholstering sofas and chairs and for bed bottoms, etc., and consists in subjecting the spring to a tempering process after it has been completed in the usual manner, whereby its strength, elasticity, and durability are greatly increased. The ordinary furniture spring is made of hard-drawn wire, coiled and forced to the proper shape, and when this is done the spring is considered finished, without having been subjected to any tempering process other than what is incidental to the drawing of the wire. To give them a finished appearance, however, copper or other material is frequently applied by suitable means. The metal being greatly condensed and hardened in the process of drawing the wire, a good degree of elasticity is given the wire thereby;

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but in bending or coiling the wire into the proper shape the metal is unavoidably weakened, the outer portion of the wire coil is drawn or stretched, while the inner portion is crushed or shortened. When straight bars or wire is subjected to the bending process, the stretching or drawing of the outer and crushing of the inner portions are inevitable results. This greatly reduces the elasticity, strength, and durability of the spring. Being a manufacturer of furniture springs and aware of this difficulty, I have tried many experiments with a view of restoring the wire, after being bent or formed into springs, to its normal condition. This, I have discovered, can be done by subjecting the spring to a degree of heat known as 'spring-temper heat,' which is about 600°, more or less, and that a subjection to this temperature for about eight minutes is sufficient to produce the result desired. This temperature I have found to be sufficient to so far relax or produce a complete homogeneity of the metal of the spring as to add from twenty to thirty per cent to the value of the spring consequent on its increased powers of resistance. Thus treated the spring will bear much heavier pressure, and its strength and elasticity are much less impaired than the ordinary spring after long-continued use. For carrying out and putting in practice my discovery I have invented a tempering oven, for which I have an application for letters patent now pending."

The claim is as follows: "The method of tempering furniture or other coiled springs, substantially as hereinbefore described."

The answer set up various defences, and among them want of novelty and noninfringement. It averred that the process set forth in the specification of the patent was merely a method of increasing the elasticity of steel, applicable not only to furniture springs and other coiled springs, but also springs and other articles made of steel, whether coiled, bent, twisted or straight; that the same was old, well known and in common use or practice for many years prior to the alleged invention by Cary, and for more than two years before he filed his application for the patent; that said process or method had been so practised on coiled springs, uncoiled

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springs, hard-drawn steel wire, and other articles of steel in various forms, for the purpose of increasing their elasticity; and that the patent was, therefore, void. It also set forth the names of many persons to whom the process described in the patent, whether considered as a restoring process or as a tempering process merely, was known, and by whom it was practised, prior to the alleged invention thereof by Cary; and it averred that by reason of such prior knowledge and use the patent was void. It also averred that it was a common practice to subject furniture springs and other coiled springs, made of hard-drawn steel wire, to 600° of heat, more or less, in the process of finishing such springs; that the same was practised long prior to the alleged invention by Cary, by sundry persons, whose names were given in the answer; that there was not, at the time of the grant of the patent or of the alleged invention by Cary, any patentable novelty in the process described and claimed in the patent, or in the application of the process to the tempering of coiled springs for furniture, and that the patent was, therefore, void. It also set up various United States and English patents, and various printed publications, in which the alleged invention of Cary was said to have been described prior to the making of his alleged discovery and prior to his application for the patent. A replication was filed to the answer, and proofs were taken.

Prior to the filing of the bill in this suit, the patent had been sustained by a decision made by Judge Wheeler, on February 7, 1885, in the Circuit Court of the United States for the Southern District of New York, in *Cary v. Wolff*, 24 Fed. Rep. 139. On the basis of that decision a preliminary injunction was granted in the present suit by Judge Acheson, on June 12, 1885, 24 Fed. Rep. 141. In *Cary v. Domestic Spring-Bed Co.*, in the Circuit Court for the District of New Jersey, on July 28, 1885, in a suit on the same patent, Judge Nixon, following Judge Wheeler and Judge Acheson, granted a preliminary injunction, 27 Fed. Rep. 299. On January 6, 1886, 26 Fed. Rep. 38, Judge Nixon dissolved the injunction in the New Jersey suit, on the presentation of new affidavits relating to the novelty of the invention, and on February 2,

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1886, the preliminary injunction in the present suit was suspended on the giving by the defendant of a bond.

After the proofs were taken in the present suit, it was brought to a final hearing before Judges McKennan and Acheson, and they sustained the patent, following Judge Wheeler's decision. Their opinions are reported in 31 Fed. Rep. 344, 347. On August 3, 1887, the court entered an interlocutory decree, holding the patent to be valid and to have been infringed, awarding to the plaintiffs a recovery of profits and damages, with costs, referring it to a master to take the account of profits and damages, and granting a perpetual injunction. The master reported six cents damages and costs in favor of the plaintiffs. The plaintiffs excepted to his report, and the court, on a hearing of the exceptions, entered a final decree, on February 16, 1889, awarding to the plaintiffs a recovery of \$8745.34, and costs. The opinion of the court on the exceptions is found in 37 Fed. Rep. 654. The defendant has appealed to this court.

The invention claimed, as appears from the specification, is a method of restoring steel wire which has been mechanically strained, by subjecting it to a temperature of 600°, more or less, whereby its disturbed and disarranged molecules are allowed to assume their normal relation. The claim limits the method to its application to "furniture or other coiled springs;" but it appears from the evidence that the process, as applied to those springs, is in no respect different, in method or effect, from the same process when applied to any mechanically strained wire, or to steel made in straight pieces or strips, or otherwise. The claim covers broadly the described method of tempering, applied to any coiled springs as well as coiled springs for furniture, and if the evidence shows that, prior to Cary's invention, the method had been used for the restoration of any springs of strained steel, or other articles of strained steel having the resiliency which is a well-known property of steel, the claim is substantially anticipated. Particularly, if the method claimed had been used by others to restore articles of coiled spring steel, even though they were not used for furniture springs, the claim is anticipated.

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In the testimony for the plaintiffs, it appears to be contended that, in order to establish the charge of infringement, the patent is to be construed so as to cover the restoring of strained steel springs by the application of any temperature, less than a red heat, which will produce in the metal a blue color. If that be true, the patent must be so construed also in comparing it with the prior state of the art. Mr. Brevoort, an expert for the plaintiffs, says that if a coiled spring is attempted to be used, without further treatment, for a furniture spring, the wire will take a set and lose its resilient properties, and its usefulness will be lost. He adds: "To cure this defect the spring must be tempered, as it is called in the trade, and the way of doing this upon such springs constitutes the process of the Cary patent. The process described in the patent gives to the spring apparently the same qualities as would be imparted to steel by tempering. But I do not know that the process is really one of tempering strictly so called, although it produces like results."

The date of Cary's alleged invention is December, 1870, and the question is, what was the state of the art at that date. Mr. Brevoort explains "the ordinary tempering process" as follows: "Steel is ordinarily tempered substantially in the following way: The steel is first best heated to a cherry red; it is then suddenly cooled either in water or oil; it is then in a very brittle and exceedingly hard condition and is extremely liable to be warped or bent during the hardening as well as during the heating. The next step is to reheat the article carefully and gradually and watch the appearance of a bright portion of the surface of the article, when certain colors will be noticed following one another in succession; first a very light yellow, then a deeper yellow, shading into purple, then a deeper purple, until finally the purple merges into blue, and lastly a blue color, yellow, purple and blue being the three prominent colors; the colors indicate different degrees of hardness in the steel and act as guides, telling when the proper degree of temper has been reached for any desired article; thus, for example, when the yellow just begins to shade into the purple the proper degree of hardness for a penknife has been reached, and the

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further drawing of the temper is stopped ; thus, if a spring is to be made the temper is drawn until a blue color shows, when the further drawing of the temper is stopped ; the above is an outline of the ordinary tempering process as I have known it for the last twenty years." The metal is partially restored to its original condition, by heating it to a blue heat, if the condition of spring temper is desired, or to a red heat if it is wished to have a perfect restoration of the metal. In making wire, the metal is rolled into the form of a rod, which is drawn, when cold, through successively smaller holes in a draw-plate. It is thus gradually reduced in diameter, and the effect of the strain is to compact it and make it very hard, increasing its elasticity up to a certain point, and finally weakening the material. For many years, in drawing wire to small sizes, it has been the practice to heat it to a red heat between successive drawings, and thus to completely restore it, rendering it less brittle and preventing the fracture of it by the strain of the drawing process. At the conclusion of the drawing operation, when the wire has passed through the dies several times, and is hardened and elastic, the wire is called "hard-drawn," and in that state it comes to the hands of the makers of furniture springs. It is shown by the evidence to have been well known in the art that wire weakened and strained by drawing, could be completely restored to its original soft state by heating it to a red heat and gradually cooling it, producing thus, by the operation of annealing, the opposite of the "hard-drawn wire," of which Cary speaks in his specification. It was also known that if such strained and weakened hard-drawn wire was heated to a temperature less than red heat, but sufficient to blue it, a partial process of restoration would be effected, which would add strength and elasticity to the wire and fit it for making springs and corset steels. The defendant's witnesses, Roberts and Booth, state that, prior to the date of Cary's alleged invention, they practised this method of blueing hard-drawn wire, so as to increase its strength and elasticity. The testimony shows the prior use of the Cary process applied to wire to effect the same results, and to correct the same undesirable consequences of mechanical strain, which are described in the Cary specification.

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The two principal matters relied on by the defendant to show the invalidity of the patent are (1) the prior use of what are called the New England wire clock-bells; and (2) the blued hair-springs. It is clearly shown by the witnesses for the defendant that, prior to Cary's alleged invention, wire clock-bells and hair-springs had been subjected to heat in the manner described in the Cary specification, and with the same blueing effect. The treatment to which the articles were subjected was in all respects the same in the prior use as in the patented process. The only contention of the plaintiffs is that the purpose of the prior use was not the same, and that the results, so far as they were those of the patent, were accidental.

Higgins, a witness for the defendant, thus describes the way in which wire clock-bells were made, prior to Cary's alleged invention. He says that "the untempered steel wire was taken from the hank and straightened by machinery, cut off at the proper length, and then tumbled in sawdust to clean the oil from it. Then the brass collet was driven on to one end, a small coil of silver was put on for the purpose of brazing the steel and brass together, then borax and water were put on, and they were brazed together, and then were tumbled in sawdust to clean off the borax, and then was wound on a wooden block, then turned by a pair of plyers to the proper shape, then was blued and oiled, and then they were ready for use." He also says that the method of "blueing" was this: "They were put in piles of a hundred each, and then spread on to a sheet-iron pan, and then put into an oven and there kept until the heat blued them, and then taken out and oiled ready for use. They were cooled in the air;" that the object of the winding was to put them into a "bell" form; that the effect of the winding was to make the vibration — to give them the sound; that the blueing stiffened them and gave them the tone; and that the bell, when struck by a clock hammer before blueing had no sound, while after blueing it had a good tone.

Horton, a witness for the defendant on the same subject, says that he used to make bells of untempered steel wire, although some of it was drawn harder than others; that some of it was hard-drawn steel wire; and that the object of heat-

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ing the coiled wire was to make it sound and to stiffen it. He also describes the manufacture by him, during the ten or twelve years succeeding 1846, of wire clock-bells of a spiral form, not helical, which were blued in the same way and for the same purpose.

Andrews, a witness for the defendant, gives testimony to the same effect, and says that the coiling of the wire, to give it the shape of a "bell," weakens the spring and causes it to lose its elasticity, while subjecting it to heat makes it more springy and elastic.

Thomas, a witness for the defendant, states that he had known the wire clock-bells for forty years; that they were made from hard, untempered steel wire, straightened, cut into lengths, then wound on a form, and subjected to the blueing process to make the spring; and that there was no spring to the wire until it was blued.

Warner, a witness for the defendant, states that the wire was steel wire, used just as it was drawn; that the coiling of the wire upon a block to give it the form of a wire bell stretched the outside and upset the inside, and weakened the wire; and that the blueing process restored it and gave it more elasticity.

Broomhead, a witness for the defendant, states that as early as about 1863 he saw hard-drawn steel wire used in the manufacture of clock-bells.

Higgins also testifies that he discovered, as early as 1866, that the blueing process made the steel stiffer than it was before; and that he had known since 1866 that the tendency of the spring to keep its shape, and to restore itself to its proper shape when the coils were drawn apart or pressed together, was increased by the blueing process.

Gardiner testifies that he knew that heating of strained bell steel stiffened it, making it stronger and more elastic, and that he would have known that the process of blue-heating steel wire in the form of furniture springs would have increased its stiffness and elasticity in a measure.

As to the hair-springs, they are used in marine clocks, to control the balance, and are steel springs made of steel wire,

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rolled down. Hubbell, a witness for the defendant, made them as early as 1848. He describes the way in which they were made by him in 1848 as follows: "The first process was taking the wire in the coil and passing it between two steel rolls to a required thickness. They were cut up to the proper lengths, fastened to a hub, wound on a disc, and wound down solid. We wound them down according to the tension of the wire, so that when they were let loose the outside coils were of about or nearly the right diameter. The next process was twisting them into a snail of a required form and blueing them. I blued them on an iron placed over a fire. They were then removed from the snail. All the inequalities were remedied by bending and twisting by a pair of plyers into the proper shape. They were then ready for use." He says that he used steel wire, untempered; that the object of blueing the spring after it had been so wound, was to equalize the density—the elasticity; that the blueing process had that effect; and that he had repeatedly tested blued hair-springs and unblued hair-springs, to compare their elasticity with each other, and that the blued spring would sustain double the tension or strain that the unblued one would, without bending.

Wright, a witness for the defendant, describes the use of the same process by him on hair-springs for seven years following 1848; and says that the steel wire was untempered, just as it came from the wiremaker; and that the blueing increased its elasticity.

Testimony to the same effect was given by the witness W. B. Barnes, who said that the steel wire was hard-drawn and untempered; and that the blueing had the effect of keeping the spring near the shape of the snail, and also giving it temper or elasticity.

Hendrick, another witness for the defendant, testified to the same effect.

It is contended for the plaintiffs that the bell-making process was for a different purpose from that contemplated by Cary in his specification; that the results were not analogous; and that, therefore, the patent was not anticipated. But we are of opinion that in the Cary process and the bell-making

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process the operations are precisely the same. In both, the operator is dealing with wire which is strained by being bent past the elastic limit, and is deadened thereby. The wire is blueed by subjecting it to a degree of heat sufficient for the purpose, and is then allowed to cool. The result in both cases is the same, namely, the restoration, stiffening and equalizing of the wire, and the only difference is in the use to which the resulting article is put. In both, the wire is made stiffer and more spring-like, these qualities being utilized, in one case in a furniture spring, and in the other in a clock-bell. Cary observed that, in winding furniture springs, the wire, already weakened by the drawing process, was still further strained and deadened, so as to impair the quality of the spring. The question was, how to equalize and stiffen the mechanically strained steel wire. The same problem had been solved by the clock-bell makers, and the solution of the problem was merely the use of the knowledge possessed by those skilled in the art. The wire used in making the clock-bells was also hard-drawn wire; but it does not appear that the process of the patent acts differently, when applied to strained hard-drawn wire, from what it would if applied to strained wire that was not hard-drawn.

The difference contended for by the plaintiffs, between the process of blueing wire clock-bells and the process of blueing furniture springs, in that one deals with spiral articles and the other with articles of a helical form, is not a difference in the process, but is at most a difference in the articles to which the process is applied. If the straining of furniture springs is peculiarly aggravated because of their shape, the difference is merely one of degree, not of kind. Moreover, the Cary claim describes the process as applicable to the manufacture of furniture springs "or other coiled springs." A coiled wire bell, although not a furniture spring, is a coiled spring; and it appears from the evidence that any wire drawn through dies, although not coiled, is, when heated to a blue color, stiffened and its elasticity increased.

In rebuttal of the defendant's evidence as to wire clock-bells and hair-springs, it is admitted that the plaintiffs show that

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sundry witnesses would not have known that the blueing process was applicable to the treatment of such heavy material as furniture springs, and that it was not used in tempering clock-springs of wide, flat steel, but there was applied to such springs what is called in the record the old process of tempering. But, in the first place, these witnesses were not manufacturers of furniture springs; and, in the second place, the reason why the old process of tempering is not used on furniture springs, is that their upright shape, like an hour-glass or the half of an hour-glass, precludes them from being heated to a red heat without their sagging and becoming distorted. The clock-springs can be laid flat upon a support, so as not to sag while heated, and there is no reason, in regard to them, for changing the old process of tempering for another. In addition, even some of the plaintiffs' witnesses admitted, on cross-examination, that they knew that the treatment of the wire bells stiffened the steel, and allowed its molecules to return to their proper relations, and that they would have expected the application of the blueing process to furniture springs to increase their elasticity to some extent. But it does not amount to invention to discover that an old process is better in its results, when applied to a new working, than would have been expected, the difference between its prior working and the new working being only one of degree and not one of kind. It has been often held that the mere fact that one who uses a patented process finds it applicable to more extended use than has been perceived by the patentee, is not a defence to a charge of infringement. It follows necessarily that the public cannot be deprived of an old process because some one has discovered that it is capable of producing a better result, or has a wider range of use than was before known.

In *Smith v. Nichols*, 21 Wall. 112, it was held that a mere carrying forward, or new or more extended application, of the original thought, a change only in form, proportions, or degree, the substitution of equivalents, doing substantially the same thing in the same way, by substantially the same means, with better results, was not such invention as would sustain a patent; and in *Roberts v. Ryer*, 91 U. S. 150, it was held that

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it was no new invention to use an old machine for a new purpose, and that the inventor of a machine was entitled to the benefit of all the uses to which it could be put, no matter whether he had conceived the idea of the use or not.

It is contended, as against the wire bells, that the evidence does not show the application of the patented process to an article designed to be used as a spring. But the clock hair-springs are quite as truly springs as the furniture springs, for they require the exercise and use of the resiliency of tempered steel. Both are subjected to the same strains in coiling; both for the same reasons need restoration; and in both the application of a blue heat produces the same desirable results.

Within the rule laid down by this court in *Hollister v. Benedict Mfg. Co.*, 113 U. S. 59, there was nothing more than mechanical skill in arriving at the alleged invention, in view of the state of the art. Cary says, in his specification, that "in bending or coiling the wire into the proper shape, the metal is unavoidably weakened;" that "this greatly reduces the elasticity, strength, and durability of the spring;" that "being a manufacturer of furniture springs, and aware of this difficulty," he had made many experiments with a view to restoring the wire, after being bent or formed into springs, to its normal condition; and that he had discovered that that could be done "by subjecting the spring to a degree of heat known as 'spring-temper heat,' which is about 600°, more or less, and that a subjection to this temperature for about eight minutes is sufficient to produce the result desired."

It is contended, however, by the plaintiffs that the applicability of the former processes is contradicted by the fact that no one had used them for the manufacture of furniture springs, and that as soon as Cary's process was made known the art of making furniture springs was revolutionized. But, it was said by this court in *McClain v. Ortmyer*, 141 U. S. 419, 428: "That the extent to which a patented device has gone into use is an unsafe criterion even of its actual utility, is evident from the fact that the general introduction of manufactured articles is as often effected by extensive and judicious advertising, activity in putting the goods upon the

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market and large commissions to dealers, as by the intrinsic merit of the articles themselves;" and (p. 429) that while, "in a doubtful case, the fact that a patented article had gone into general use is evidence of its utility, it is not conclusive even of that, much less of its patentable novelty."

In the present case, it appears that it was not until a short time before 1870 that furniture springs began to be commonly made of steel wire. It was not until 1868, when the general introduction of Bessemer steel and open-hearth steel afforded a cheap substitute for iron, that the use of steel became general in the art in question. It was then natural that there should be introduced into that art methods of treatment which were well known as applied in allied arts. The method of the patent, already in use, thus occurred to Cary; but he was appropriating a method which was common property. When steel was adopted for the first time in any art, it was natural that existing methods of treating it should be applied to its new use in the given art. The case is merely one of a double use. Nor is it of force that experts expressed surprise that the process in question was applicable to furniture springs.

Cary was not the first to discover the process described in his specification, for the restoration of steel. He claims only the process; and the use made of the article after it is subjected to the process does not affect the nature of the process itself. As a process, there is nothing new in the subject-matter of the claim. The claim does not cover an improvement in furniture springs or other coiled springs, as a new article of manufacture; and the "coiled springs," to which, by the claim, the method of tempering is to be applied, include all such springs, irrespective of the use to which they are to be applied. The method or process claimed is substantially the old method of restoring mechanically strained steel.

The present case is covered by the cases of *Vinton v. Hamilton*, 104 U. S. 485; *Stow v. Chicago*, 104 U. S. 547; *Locomotive Truck Case*, 110 U. S. 490; *Blake v. San Francisco*, 113 U. S. 679; *Thompson v. Boisselier*, 114 U. S. 1; *Miller v. Foree*, 116 U. S. 22; *Dreyfus v. Searle*, 124 U. S. 60; *Brown v.*

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District of Columbia, 130 U. S. 87; *Aron v. Manhattan Railway*, 132 U. S. 84; *Watson v. Cincinnati, Indianapolis &c. Railway*, 132 U. S. 161; *Marchand v. Emken*, 132 U. S. 195; *Royer v. Roth*, 132 U. S. 201; *Hill v. Wooster*, 132 U. S. 693, 701; *Burt v. Ivory*, 133 U. S. 349; *Howe Machine Co. v. National Needle Co.*, 134 U. S. 388; *Florsheim v. Schilling*, 137 U. S. 64; *Consolidated Roller-Mill Co. v. Walker*, 138 U. S. 124; *Ansonia Co. v. Electrical Supply Co.*, 144 U. S. 11; *Ryan v. Hard*, 145 U. S. 241. The principle deducible from those cases is that it is not a patentable invention to apply old and well-known devices and processes to new uses, in other and analogous arts. The decision in *Ansonia Co. v. Electrical Supply Co.*, *supra*, is very pertinent. In the opinion in that case, the cases were reviewed which establish (1) that the application of an old process or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result had not before been contemplated; and (2) that, on the other hand, if an old device or process be put to a new use, which is not analogous to the old one, and the adaptation of the old process to the new use is of such a character as to require the exercise of the inventive faculty to produce it, such new use will not be denied the merit of patentability.

In the case of *Cary v. Wolff*, 24 Fed. Rep. 139, Judge Wheeler remarked that the discovery of Cary was that the application of heat would restore the lost strength and elasticity of the wire, consequent on the displacement of its particles; that the application of heat for that purpose was not known until it was applied to that kind of springs in their peculiarly weakened state; that the discovery was of a new application of an old process, which produced a new and highly useful result; that wire bells for clocks were made to have sonorous properties by the same process in kind, but for a different purpose and with a different result; that what seemed to be the nearest to it was the method of shaping and spacing the coils of hair-balance-springs for marine clocks, by coiling the wire into a mould of the required shape, called a snail,

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and subjecting it to heat while there in place, to make it retain its shape, but there was no displacement of the particles of which the wire was composed, by distortion, and the process was not a restoration of any lost quality, but a mere shaping of the wire into the article desired; that the discovery of that effect of restoration by Cary's mode was new; that experts called by the defendants admitted that they had not believed the result would be produced, until they saw the process tried in connection with that litigation; and that such production of a new and useful result, although by a new application of an old process, was patentable; citing *Crane v. Price*, 1 Webster's Pat. Cas. 393; *Smith v. Goodyear Vulcanite Co.*, 93 U. S. 486; and *Loom Co. v. Higgins*, 105 U. S. 580.

In the present case, in the opinion of Judge Acheson granting the preliminary injunction, 24 Fed. Rep. 141, the court cited and followed the decision of Judge Wheeler.

In the opinion of Judge Nixon in *Cary v. Domestic Spring-Bed Co.*, 26 Fed. Rep. 38, he stated that, in ordering the preliminary injunction, he had followed the decision of Judge Wheeler; and that is shown also by his opinion granting such injunction. 27 Fed. Rep. 299.

In the opinion of Judge Acheson in the present case, on final hearing, 31 Fed. Rep. 344, concurred in by Judge McKennan, 31 Fed. Rep. 347, it is stated that the process of the patent is based on the fact that the evils resulting from the distortion of hard-drawn steel wire, in the ordinary operation of coiling it into springs for furniture, can be removed by a single application of heat, as set forth in the specification, so as to result in a greatly improved spring; that furniture springs so treated came into immediate and very general use, on their introduction into the market, largely superseding springs not subjected to that treatment; and that experts and others practically familiar with the treatment and behavior of steel were greatly surprised at the result effected by the patented process, it being contrary to all their previous conception and experience. The opinion then cites and quotes from the opinion of Judge Wheeler, and states that the latter opinion held that the Cary process was new and patentable, although previously, in the

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manufacture of wire bells for clocks, heat had been applied to them for the purpose of giving them the desired sound and tone, and hair-balance-springs for marine clocks were subjected to heat while coiled in the grooves of a metallic plate, for the purpose of permanently setting the coils in proper relation to each other. The opinion of Judge Acheson further said that, after giving to the subject-matter an independent investigation, the court saw no reason to doubt the correctness of Judge Wheeler's conclusions, and added: "The purpose, object, and result of the application of heat in the practice of the Cary invention are so entirely different from those aimed at and attained by the application of heat in the manufacture of wire clock-bells, hair-balance-springs for marine clocks, and the other shown instances of its prior use, that we do not hesitate to adopt the conclusion of Judge Wheeler upon this branch of the case."

But we are of opinion that the same principle set forth in the patent was developed in the manufacture of the wire bells for clocks and of the hair-balance-springs; that there was no patentable invention in applying that principle to the springs mentioned in the specification, and that the case is merely one of a double use.

It results that the decree of the Circuit Court must be

Reversed, and the case be remanded to that court with a direction to dismiss the bill, with costs.

MR. JUSTICE BREWER did not sit in this case or take any part in its decision.