

CARY AND OTHERS V. LOVELL MANUF'G CO., LIMITED.

*Circuit Court, W. D. Pennsylvania.*

June 24, 1887.

1. PATENTS FOR INVENTIONS—PATENTABILITY.

The case of *Cary v. Wolff*, 24 Fed. Rep. 139, followed; and letters patent No. 116,266, dated June 27, 1871, granted to Alanson Cary, sustained.

2. SAME—SPIRAL SPRINGS—USE OF HEAT.

The Cary invention, being based on the discovery that a single application of heat to hard-drawn steel wire, weakened by winding into spiral forms, would restore its strength and elasticity, such application being novel, and producing a new and highly useful result, the process was patentable, notwithstanding previously heat had been applied to wire clock-bells and other articles, but for purposes and with results entirely different.

In Equity.

*Causten Brown, Wm. O. Witter, and Wm. H. Kenyon*, for complainants.

*Wm. Bakewell and John K. Hallock*, for respondents.

*Coram* McKENNAN and ACHESON, JJ.

ACHESON, J. This suit is for the infringement of letters patent No. 116,266, dated June 27, 1871, granted to Alanson Cary, for an "improvement in furniture springs." The invention relates to spiral springs, extensively used in upholstering sofas and chairs, and for bed-bottoms, etc., which are usually made in a conical form, of hard-drawn steel wire, coiled and forced to the proper shape. The specification states that, the metal being greatly condensed and hardened in the process of drawing the wire, a good degree of elasticity is thereby given to the wire; but that in bending or coiling the wire into the proper shape the metal is unavoidably Weakened,—the outer portion of the wire coil being drawn or stretched, while the inner portion is crushed or shortened; and that thereby the elasticity, strength, and durability of the spring are much reduced. The invention consists in a process for restoring to the wire of the spring the strength and elasticity which it lost by this distortion, and this is effected by subjecting the spring, after it has been completed

in the usual manner, for the space of about eight minutes, "to a degree of heat known as 'spring-temper heat,' which is about 600 deg., more or less," whereby a complete homogeneity of the metal is produced, and greatly increased strength, elasticity, and durability are imparted to the spring. The claim of the patent is for "the method of tempering furniture or other coiled springs, substantially as hereinbefore described."

The process of the patent, as will be perceived on an inspection of the specification, 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, so as to result in a greatly improved spring. Of the great utility and value of the patented process there can be no question, under the proofs. Undoubtedly it secures the beneficial results specified in the patent; and hence furniture springs so treated, upon their introduction into the market, came into immediate and very general use, largely superseding springs not subjected to the treatment.

In this connection, another significant fact, well established by the proofs, deserves mention. 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 conceptions and experience.

This patent was passed On, and its validity sustained, on final hearing, and after full consideration, by the circuit court for the Southern district of New York, in the case of *Cary v. Wolff*, 24 Fed. Rep. 139. In the course of his opinion, Judge WHEELER there says:

"The process of the patent does not merely add temper as a quality to steel which did not have it before. It restores the lost strength and elasticity of the wire consequent to the displacement of the particles of which it is composed by the process of making it into springs. The discovery was that the application of heat would effect that restoration, which is a different thing from tempering. Subjection to heat for casting and tempering, and to produce malleability, and for various other purposes, was well enough known; but it was not known for this purpose until it was applied to this kind of springs in their peculiarly weakened state. The discovery was of a new application of an old process, which produces a new and highly useful result."

Judge WHEELER, therefore, held that the Cary process was new and patentable, notwithstanding previously, in the 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 relations to each other.

The adjudication in the Second circuit is entitled to great weight, and, as to questions directly passed on, ought to be followed by a court of coordinate jurisdiction, unless a mistake of law or fact is manifest, or new evidence leads to a different conclusion. *Searls*

v. *Warden*, 11 Fed. Rep. 501; *American B. L. Co. v. Cotter*, Id. 728. We have, however, given to the subject-matter of this litigation an independent investigation; and, after the most careful consideration of so much of the evidence in the

case of *Cary v. Wolff* as has been stipulated into this case, and the new proofs, we are unable to discover any reason to doubt the correctness of Judge WHEELER'S conclusions. We agree with him that the patent is not for a mere tempering process, as commonly understood. True, that term occurs in the patent, but clearly not to denote the old and well-known tempering process, which consisted of three steps, viz., heating to red heat, sudden cooling by plunging into water or oil, and reheating to draw the temper. The term "tempering," as the whole context shows, is used in the patent not in its ordinary sense, but to designate the particularly described method of treating spirally coiled springs of hard-drawn steel wire to overcome the evils from distortion, and to improve them in strength, elasticity, and durability. When, therefore, the claim speaks of "the method of tempering furniture or other coiled springs, substantially *as hereinbefore described*," resort is to be had to the specification for the proper Understanding and construction of the claim. *Roberts v. Dickey*, 4 Fish. Pat. Cas. 539. Plainly the thing here patented is the described "method" or process.

Again 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. "It is not to be doubted," says Mr. Justice STRONG in *Roberts v. Dickey*, supra, "that a novel process or method of operation, that amounts to a successful application of known things to a practical use, is patentable as an art." And in *Mowry v. Whitney*, 14 Wall. 620, we find it decided that the application of annealing to the manufacture of car-wheels was new and patentable, notwithstanding the fact that the ordinary process of annealing had been applied to other kinds of castings.

The defense resting upon the new evidence touching the alleged prior use of the process in question, in the manufacture of spiral springs at the works of the American Spiral Spring Butt Hinge Company, has received our careful attention. The proofs here are very voluminous, and we cannot undertake to discuss them in detail. To do this would unreasonably extend this opinion. We must content ourselves with saying that the evidence fails to satisfy us that the Cary process was used at said works, or by any person connected therewith, prior to the date of Cary's invention, in December, 1870. Nor is the testimony of Purmont Bradford, as to his applying heat to some few lathe springs about the year 1864, convincing. He is very uncertain as to the number made, and in other respects his statement is incomplete. He is altogether uncorroborated, although it would seem that in some collateral particulars, at least, it was open to the defendants to sustain him, if it could be done. It would be very unsafe to overthrow a patent upon such testimony. If we assume that Col. Paine, prior to 1870, treated the one spiral spring men-

tioned by him, it is still quite evident from his statement that the treatment was merely experimental, and was not followed

up, but abandoned. It is the settled rule that a defendant in a suit for the infringement of a patent for an invention, who sets up prior use and want of novelty as a defense, has the burden of proof upon him to establish the facts set up beyond all reasonable doubt. *Cantrell v. Wallick*, 117 U. S. 690, 6 Sup. Ct. Rep. 970. Certainly the defendants' evidence here falls far below this standard of proof.

In respect to the prior publications relied on as a defense, we need only say that, in our judgment, they do not fulfill the requirement of the established rule that such publications must contain in themselves such a full, clear, and exact description of the invention as, without anything more, will enable one skilled in the art to practice the invention. *Seymour v. Osborne*, 11 Wall. 516.

Upon the question of infringement, we adhere to the views we expressed at an earlier stage of the case. The proof of infringement is, we think, quite clear. It may be possible that the defendants are using a degree of heat somewhat higher than that specially mentioned in the patent, but so did the defendants in *Gary v. Wolff*, supra. So long as the springs are kept below a red heat, the substance of the invention (as Judge WHEELER remarks) is taken. *Tilghman v. Proctor*, 102 U. S. 707. Nor is it material that the defendants cool their springs by plunging them into cold water. The beneficial results are secured by subjecting the springs to the prescribed heat, and the patent is altogether silent as to the manner of cooling. And, if the springs are not raised to a red heat, it is immaterial whether air-cooling or water-cooling is practiced.

MCKENNAN, J. The foregoing case was heard at final hearing, before both Judge ACHESON and myself, and has been the subject of careful consideration and consultation, and the above opinion is the result of our considerate concurrent judgment.

Let a decree in favor of the complainants be drawn.