

Case No. 17,337. WEBSTER ET AL. V. NEW BRUNSWICK CARPET CO.

[1 Ban. & A. 84;¹ 5 O. G. 522.]

Circuit Court, D. New Jersey.

March, 1874.

INFRINGEMENT OF PATENTS—COMBINATIONS—OMISSION OF ELEMENT—MECHANICAL EQUIVALENTS—LOOMS FOR WEAVING PILE FABRICS.

1. Where a patent has been granted for a combination of old mechanical elements, it is an infringement to use all of the elements but one, and for the one not used, substitute another old element, which, at the time of the invention, was known as its mechanical equivalent, performing substantially the same functions.

[Cited in *Welling v. Rubber-Coated Harness-Trimming Co.*, Case No. 17,382; *Putnam v. Hutchinson*, 12 Fed. 134.]

2. In order to avoid the charge of infringement in such cases, the substituted element must be a new one, or must perform a substantially different function, or must be unknown at the date of the patent as a proper substitute for the one omitted from the patented combination.

[Cited in *Welling v. Rubber-Coated Harness-Trimming Co.*, Case No. 17,382.]

3. The patent granted to William Webster, August 27th, 1872, for “a new and useful improvement in looms for weaving pile fabrics,” described and claimed the invention to be a combination of mechanical elements, one of which was a wire bar or trough mounted on a vertical shaft, pivoted at the outer end, with the end nearest to the loom oscillating to the extent required to transport the wire into the shed. The defendant used a loom containing all of the elements of Webster’s patent, except that last mentioned, for which was substituted a wire bar or trough mounted upon a horizontal rock shaft, supported by two arms, and reciprocating equally throughout its whole length. It was shown by the evidence that the latter method of supporting the trough was old in the art at the date of Webster’s invention, and that it performed no different function from the Webster method. *Held*, that the defendant’s loom infringed the patent of Webster.

[Distinguished in *Webster Loom Co. v. Higgins*, Case No. 17,342.]

In equity.

C. A. Seward and B. R. Curtis, for complainants.

Geo. Gifford and Wayne Parker, for defendants.

NIXON, District Judge. This bill is filed against the corporation defendant, for infringing certain letters patent, No. 130,961, issued to William Webster, August 27, 1872, for “a new and useful improvement in looms for weaving pile fabrics.”

The answer denies the infringement, and sets up, as a defence, a prior invention by one Ezekiel K. Davis; and that letters patent were granted to him, for inventions in looms for weaving pile fabrics, dated February 9, 1869, and numbered 86,651; that the looms which the defendants had in use, and which were alleged in the bill of complaint to infringe the Webster patent, were constructed and operated in conformity to the description contained in the said patent to Davis; that defendants had a license under said patent to use said looms; and that they rightfully and lawfully used under said license.

I. The complainants' patent refers to the wire motions of a loom in the manufacture of pile fabrics. It is a patent for a combination; and the question of infringement is determined by the construction of the fifth claim, which, in the specifications is stated as follows:

"In combination, the lay and its rigid shuttle-box, the pivoted vibrating wire trough, the reciprocating driving slide, and the latch moving thereon, the latter being operated by the wire box, the combination being and operating substantially as described."

The combination has six constituents: (1) The lay not differing from the lay used in the ordinary loom, whose functions are to support the shuttle in its motions backward and forward. (2) A rigid shuttle-box, as distinguished from a sliding one, placed on the same side of the loom as the wire motion, and so attached to the lay that it partakes of its backward and forward movements. (3) The pivoted vibrating wire trough, which acts as a support to the wires. By means of the latch, and the reciprocating driving slide, the wires are drawn from the fabric into this trough, which oscillates towards the lay, transporting the wires into the proper position, where they are pushed out of the trough into the open shed of the loom. (4 and 5) The reciprocating driving slide and the latch, the former forcing the wire from the trough into the shed, and the latter catching into the head of the wire by a spring hook, drawing it again from the fabric into the trough. (6) The wire-box, which is a contrivance or receptacle for the heads of the wires, when they are inserted in the fabric. The box has a slot on its top, under which there is always the head of a wire when the loom is in operation. The nose of the latch drops into this slot and engages the head of the wire that lies nearest to the breast-beam of the loom, whence it is withdrawn to the trough. The wire-box has also other functions. It operates as a cam, disengaging the latch from the wire head after the wire has been inserted into the shed, and supporting the hook so that it cannot engage with any of the wires in the box while the hook and trough are passing from the open shed to the breast-beam.

The evidence hardly admits of a serious doubt but that the defendants have infringed

this combination. The testimony of the complainants' expert, Mr. H. B. Renwick, is explicit in the matter. After an examination of the looms in use by the defendant corporation, at their works in New Brunswick, and after producing two models, one, marked "P," and representing the parts-making up the combination referred to in the fifth claim of Webster's patent, and the other, marked "D," exhibiting the loom seen by him at New Brunswick, so far as it represented the mechanical elements or contrivances that are referred to in said fifth claim, he testified that one contained substantially all the parts embraced in the other; that they operated in combination in the same way, and produced the same effect. He said, referring to the model of the machine used by defendants:

"In this model, the lathe represented is an ordinary lathe, to which a shuttle-box is rigidly attached, so that it oscillates with the lathe. In it there is a vibrating wire trough T, which is long enough to support the wire—support that portion of it, which is not in either the shed or the fabric, or the whole of it when the wire is pulled out—and so oscillates as to transport the wire from the locality at which it was pulled out to that at which it is to be inserted, thus performing precisely the same duties that the wire trough performs in the Webster loom. It differs from Webster's solely in the way in which it is mounted, so as to be capable of oscillating to the required extent. In Webster's the trough is mounted on a vertical shaft or pivot. In the defendants' loom the trough is mounted upon a horizontal shaft. But the two troughs are the same, and support and transport the wire in substantially the same way. The defendants' loom has a reciprocating driving slide, which acts as a piston and pushes the wire out of the trough into the shed, and also carries the latch or hook, which pulls the wire out of the fabric into the trough. This driving slide is identical, in all respects, with that of Webster. The defendants' loom has also a latch or spring hook, which engages with a nick or depression in the head of the wire, and operates to pull the wire out of the fabric and deposit it in the trough. This latch is substantially identical in construction and operation with Webster's latch. In the defendants' loom there is likewise a wire-box, which contains the heads of the wires when they are inserted in the cloth, and along the bottom of which the heads of the wires slide, as in Webster's wire-box. The top of this box in the defendants' loom, is so shaped that when the nose of the latch strikes the top of the box, the latch is lifted and the wire released from its grasp and left in the cloth; also, in such a way that it holds the latch lifted while the latch and trough are oscillating toward the breast-beam, thus preventing the latch from engaging with the wire head while it is so moving; and the top of this box has also a slot in it, which permits the latch or hook to drop so as to take hold of that wire which is nearest the breast-beam, in order that this wire may be drawn out of the cloth. The top of the Webster latch-box is constructed in the same way to produce these same effects."

Instead of contradicting this testimony of the identity of the two machines, the defendants' expert, Mr. E. S. Renwick, in effect corroborates it. He recognizes their difference

in the mode of mounting and operating the wire trough, as Mr. H. B. Renwick did. But it is a significant fact that the able counsel of the defendants addressed no question to him which would test the accuracy of the direct testimony of the complainants' expert, that, notwithstanding this difference in mounting, the troughs were the same, and supported and transported the wire in substantially the same way; and the responses made by the witness to the carefully worded questions 7 and 8 show the reason why he was not interrogated upon the subject. After his examination of "Exhibit Davis Model, J. G. Jr.," he is asked, in question 7, to "state whether or not there is represented in any condition of that model substantially the combination specified in the fifth claim of the Webster patent, if that claim be not limited to the wire bar being pivoted at one end," and he replies, that, "if the wire bar or wire trough recited in the fifth claim be not limited to one which is connected with its support, at its outer end, by means of a pivot, then the said model does contain, in substance, substantially the same combination as is recited in the said claim, when the model is in the condition of having the shuttle-box rigidly connected with the lay by means of two bolts, etc."

Again, he is asked, question 8, "If the fifth claim of the Webster patent be limited to the wire bar (or trough), being pivoted at one end only, then does the Davis loom, as constructed by the Gilbert Loom Company, contain the combination specified in that claim?" and he answers: "In my opinion it does not, because the wire bar of the Davis loom is constructed with a horizontal rock shaft located below it, in such manner that the bar reciprocates bodily and equally throughout its whole extent, instead of vibrating or oscillating in a horizontal plane, as the wire bar or trough described in the Webster patent does; and because it would be impossible to attach the wire bar or trough either to the breast-beam of the loom or to the lay, as described in the Webster patent, if a horizontal rock shaft, such as the wire bar in the Gilbert loom, is connected with, were employed."

It is to be inferred that the only difference which he found in the combination used by the defendants and the combination patented by the complainant Webster, was the substitution by the former of a wire bar or trough, mounted upon a horizontal rock-shaft, supported by two arms, and reciprocating equally throughout its

whole length, for a wire bar or trough mounted on a vertical shaft, pivoted at the outer end, with the end nearest to the loom oscillating to the extent required to transport the wire into the shed.

And all the witnesses of the defendants who testified to the substantial dissimilarity of the mechanism, based their opinion upon these different methods of imparting the necessary motions to the wire trough in operating the machine.

In this state of the case, the question arises: Is this substitution of mechanical means a mere equivalent for the means employed by the complainants, or are they new, performing substantially different functions? Or in other words, have the defendants exhibited invention by dropping one of the instrumentalities of the complainants' combination, and supplying its place with another, new or old, whereby new functions, capabilities, results, have been imparted to the concrete machine? If they have, they will not be treated as infringers, although they use four of the five elements of the complainants' patent, and if they have not they will be so treated, although they only use four of the five.

What is the extent of the defendants' alteration of the complainants' patent? It is simply adopting a different method of supporting the wire trough; and the means adopted are old in the art. They have taken all the combinations of the Webster patent, except pivoting the support of the wire trough at the one end, and producing the wire motions by the oscillations of the other; and accomplish the result, possibly better in degree and more efficiently, by supporting the trough upon a horizontal shaft, and running bodily from end to end, which was a well-known device, in use for years in the Weild & Bigelow looms.

It is, as if one, examining the patented combination and admiring its efficiency, and desiring to appropriate it without the license of the inventor, should say: "This is a skilful combination, and the result benefits mankind. But all the ingredients are old, and, out of the combination, belong as much to me as to the inventor. I observe that he has not incorporated into his machinery Weild & Bigelow's mode of supporting the wire trough, and although the effect and result of his mechanism are the same, his method of producing them seems to the eye to be different. I understand the courts have held, that unless all the constituents of a patented combination are used, the patent is not infringed. I will try the experiment of substituting the Bigelow mode of supporting and adjusting the wire trough, so that the wire can be carried from the trough to the shed; and, if it prove successful, I shall secure all the benefits of the inventor's patent, leaving to him, what is too often his only recompense, the honor of the invention." He tries the experiment, and finds, to his delight, that the substituted mechanism is quite equal, if not superior, to the means designated in the patent for accomplishing the same result.

But this is not invention. It is piracy; and, if the law permits it, then all patents for a combination are worse than worthless, and may be avoided by the exercise of the most superficial attainments in mechanical knowledge.

But the law does not permit it. It protects the inventors of combinations against the substitution of equivalents, as fully as the inventors of other patentable improvements. Whatever may have been the inferences drawn from the earlier decisions of the supreme court in regard to the right of the public to use patented combinations, where all the ingredients are not taken, the recent case of *Gould v. Rees*, 15 Wall. [82 U. S.] 187, establishes the doctrine that, in order to avoid the charge of infringement in such cases, the substituted ingredient must be a new one, or must perform a substantially different function, or must be unknown, at the date of the plaintiff's patent, as a proper substitute for the one omitted from the patented combination.

Applying the principle of this case to the one in hand, it is clear that the horizontal shaft, supporting the wire trough by two arms, substituted by the defendants for the pivoted shaft of the complainants, was not new; that it does not perform substantially different functions, and that it was known at the date of Webster's patent as a substitute for the omitted mechanism.

II. The other defences of the defendants were not seriously urged, and it is not necessary to dwell upon them. The E. K. Davis patent of February 9, 1869, was not exhibited by them in evidence; and, if it had been, the testimony seems to be that the looms complained of were not constructed in accordance with the model, specifications, and claims of that patent. No allusion is made in the description of its organization in regard to the discovery, use, or utility of a rigid shuttle-box, which is the central idea of Webster's alleged improvement.

But it was claimed in the answer and insisted on in the argument, that this was a prior invention of Davis, and that he caused a model to be constructed as early as 1868, which was capable of adjustment and use with a rigid shuttle-box.

If the mutilated machine, put in evidence to establish this claim, had been altered to embrace such mechanism, when the brothers Crossley saw it in the autumn of 1868, it is, nevertheless, a fair deduction from the testimony, that Davis acquired all of his knowledge on the subject from the inspection of Webster's original drawing, made by him in the winter of 1865-6, and exhibited to Davis and others in the spring of 1868. That he did not comprehend the value of the invention, or that he did not then deem himself to be its original and first inventor, is also to be inferred from the fact that it was not claimed in his patent of the subsequent year.

The delay of Webster in taking out his patent, after he had completed his invention, seems to be satisfactorily explained. Under the circumstances it was not unreasonable. It is the

old story of poor inventors patiently waiting at the door, of rich capitalists. The Bigelow patent was about expiring, and Webster's new wire motions could only be used in union with some of the patented ingredients of the Bigelow loom. As he was unable to make an arrangement with the Higgins's, who were licensees of Bigelow, in regard to the adoption of his improvements, and as he could not get others, like Weaver or Beattie, to unite with him, from fear of suits for infringements, he was obliged to wait, either for the death of the Bigelow patent, or until the heart of capital should relent, in order to give his invention to the world under circumstances that might afford him some compensation for his years of thought and unrequited effort. It is the opinion of the court under all the aspects of the case, that there should be a decree for the complainants, according to the prayer of the bill.

NOTE [from 5 O. G. 522]. This cause having been brought on to be finally heard on the pleadings and proofs, and Mr. C. A. Seward and Mr. B. R. Curtis having been heard on behalf of the plaintiffs, and Mr. Richard Wayne Parker on the behalf of the defendant, and due deliberation having been thereupon had, it is ordered, adjudged, and decreed, and this court, by virtue of the power and authority therein vested, doth order, adjudge, and decree: I. That the letters patent set forth in the bill herein issued to William Webster on the 27th day of August, 1872, for a new and useful improvement in looms for weaving pile fabrics, numbered 130,961, are valid in law. II. That the plaintiffs are the sole and exclusive owners of all the rights created or conferred by said letters patent. III. That the defendant has infringed and violated said letters patent by using within the city of New Brunswick, and within the jurisdiction of this court, carpet-looms containing the improvements described in said letters patent and recited in the fifth claim thereof. IV. That the said defendant do account to the said plaintiffs both for the damages sustained by them and for the profits made by the said defendant in consequence of such infringement v. That an account of the said damages and of the said profits be taken and stated by S. D. Oliphant, Esq., a counselor-at-law, and the clerk of this court as master of this court, pro hac vice; and that the defendant, its attorneys, agents, servants, and employes, attend before the said master, from time to time, on notification from him, and under his direction; and that the plaintiffs may examine the said defendant, its officers, employes, attorneys, agents, and servants under oath, as to the several matters pending on the said reference; and that the said defendant produce before the said master on oath all such deeds, contracts, specifications, papers, and writings, as the said master shall direct, in their custody, or under their control, or subject to their order, relating to said matters which shall be pending before said master; and that the said master have all the authority and power conferred upon masters in like cases, by the 77th rule prescribed by the supreme court of the United States, as rules of practice for the courts of equity of the United States. VI. That a perpetual injunction issue out of and under the seal of this

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court, against the said defendant, commanding it, its attorneys, agents, servants, workmen, officers, and employes, to desist and refrain from making, using, or vending any looms for carpets containing or embodying any of the inventions or improvements described in said original letters patent to the said William Webster, and recited in the claims thereof; and from in any manner infringing upon or violating any of the rights or privileges granted or secured by said letters patent. VII. That the said plaintiffs recover of the said defendant, as well the damages as the profits, which shall be reported by the said master here under; and that upon the confirmation of his report, a decree be entered against the defendant therefor, and also for the costs of the plaintiffs in this suit in this court, and that the plaintiffs have execution therefor, and for the compensation of the said master, to be fixed on the coming in and confirmation of his report, VIII. That the parties and master may apply, upon due notice to this court upon the foot of this decree, for such other and further order, instructions, and directions as may be necessary.

{The cause was subsequently heard on exceptions to the master's report See Case No. 17,338.}

{For other cases involving this patent, see note to Webster Loom Co. v. Higgins, Case No. 17,342.}

¹ {Reported by Hubert A. Banning, Esq., and Henry Arden, Esq., and here reprinted by permission.}