

who granted the injunction in the other cases. * * * I do not think that I should have seen my way clear to allow the preliminary injunctions in the present case if it had been presented on the original motion, and the rule is a good one that the evidence which would prevent the issuing of an injunction ought to be regarded as sufficient to dissolve one already granted."

For the reasons hereinbefore stated, if, on the application for the injunction now in force, the facts now relied upon in support of the motion to dissolve had been available as a defense, I would not have allowed the temporary injunction. The complainants' right to such an injunction under such a defense would have been so doubtful that it would not have been entitled to it under the rules cited. To continue the injunction now, in view of these doubts, would certainly be a great hardship upon the defendant. According to the affidavits now before the court, the defendant is a solvent corporation. Under the Ohio law, the personal liability of the stockholders is an additional indemnity to which the complainants may look in case, upon a final hearing, its right to a permanent injunction should be established.

As the case is now presented on the motion to dissolve, one of the two parties must suffer loss. If the injunction is continued, the defendant is wholly without remedy. It has shown that it was honestly misled by complainants' conduct, and in good faith made additional investments upon the belief so formed. The complainants cannot complain if, for this reason, the benefit of the doubts expressed are given to the defendant, and the injunction is dissolved. If I am in error as to this conclusion, no great harm can result to the complainants, for if such error is established they can recover for the damages caused thereby, and their right to contest as to other infringers not able to show such meritorious claims to estoppel as defendant has established can be asserted without prejudice from this decision.

AMES & FROST CO. v. WOVEN-WIRE MACH. CO. et al.

(Circuit Court, D. Minnesota, Fourth Division. April 20, 1893.)

PATENTS—PIONEER INVENTION—COILED-WIRE FABRIC MACHINES.

The Briggs patent No. 348,150, for a machine for automatically manufacturing coiled-wire fabrics suitable for bed bottoms, mats, and the like, covers a pioneer invention, and is entitled to a liberal construction.

In Equity. Bill by the Ames & Frost Company against the Woven-Wire Machinery Company and others for infringement of a patent. Decree for complainant.

Offield, Towle & Linthicum, for complainant.

Paul & Merwin and L. L. Bond, for defendants.

SANBORN, Circuit Judge. Complainant is the owner of letters patent No. 348,150, dated August 24, 1886, for improvements in machines for weaving coiled-wire fabric for bed bottoms, invented by Orlando P. Briggs, and brings this suit against the defendants for infringement. These letters patent contain 14 claims. Claims 4 and 5 are:

"(4) An automatic machine for weaving coiled-wire fabric embracing the following mechanisms, namely, a wire coiler, means for arresting and starting the coiler at stated intervals, means for severing the coil when completed, means for supporting the fabric in position to receive the coil to be added, and means for feeding forward the fabric preparatory to the insertion of a new coil; said mechanisms being connected and driven to coact in due order and relation, substantially as set forth.

"(5) In an automatic machine for weaving coiled-wire fabric, the combination of a coiler, mechanism for starting and stopping the coiler, mechanism for severing the coil, mechanism for moving the final coil of the fabric longitudinally, and mechanism for feeding the woven fabric forward, together with means for actuating these several mechanisms so as to secure their co-operation at proper intervals of time, and in due order of sequence, to produce a continuous fabric, substantially as described."

Claims 1, 2, and 3 are for combinations of certain parts of the mechanism claimed in No. 5. The remaining nine claims of the patent relate to specific devices, or combinations of devices, that are not infringed by the defendants, provided they do not infringe the broad claims to which reference has been made. The defendants have constructed, and are using, an automatic machine for weaving coiled-wire fabric. In its construction, one of the defendants placed complainant's description of his invention before him, and tried to make such a construction as would evade it. He used mechanical devices so unlike those described in complainant's patent that it was conceded by its counsel that they would not constitute an infringement of its specific devices, if Briggs should be found not to have been the original and first inventor of an operative automatic machine for weaving this coiled-wire fabric, but a mere improver upon, or adapter of, an older machine to this purpose. On the other hand, it was practically conceded by the counsel for the defendants that, if Briggs was the first and original inventor of an operative automatic machine for weaving coiled-wire fabric, then the defendants infringed these broad claims of complainant's letters patent. It follows that the only question in the case is whether the inventor Briggs is entitled to rank as the first and original inventor of an automatic machine for weaving coiled-wire fabric of the character used for bed bottoms, mats, and other like purposes, and to treat as infringers all who make machines on the same principle, and performing the same functions, by analogous means or equivalent combinations, or as one who has simply made an improvement on a known and operative machine by a mere change of form or combination of parts, and who cannot invoke the doctrine of equivalents to suppress other improvements that are not colorable invasions of his own.

The manufacture of a woven-wire fabric for bed bottoms, mats, and other like purposes is a large and rapidly growing industry. The proofs disclose that the machine described in complainant's letters patent was the first combination of devices that, by its unaided operation, coiled wire, and converted it into a woven fabric ready for use for such purpose. Prior to this invention of Briggs, the apparatus employed to weave this fabric consisted of a broad table on which the fabric lay while it was being made, and a coiling machine arranged at one end of the table, and run by hand or

power. The coiling machine formed the wire into a spiral of uniform pitch and diameter. The fabric for bed bottoms was about six feet in length, and, when the coiling machine had formed a spiral of that length, the wire was cut, and a new coil started, which, as it revolved, was made to run through and engage with each twist of the preceding coil, thus making a firm but elastic fabric. To enable each new coil as it came in to run forward into, and properly engage with, the marginal coil of the fabric that was being woven, it was necessary, after the preceding coil was completed, to move the fabric, or the marginal coil of it, longitudinally, alternately to and from the coiler, about half the length of one twist of the coil, and forward from the line of the axis of the coil a distance equal to the diameter of the coil. This forward movement, and the longitudinal movement of the fabric alternately to and from the coiler, as each successive coil was completed, had, before Briggs' invention, been produced by the hand of the operator who stopped the coiler, cut the wire, and placed the fabric in position to receive the next coil. Briggs constructed a machine which itself produced these movements of the fabric at the proper times, and automatically manufactured the woven-wire fabric from plain wire, with no assistance from the hand of the operator. The specifications of complainant's letters patent describe the various mechanical devices which Briggs combined to constitute this machine. Many—perhaps all—of these devices, taken separately, were old, but the combination of them which Briggs formed was new. The machine he constructed by this combination was itself novel, and produced a result never before attained by machinery.

To establish their contention that Briggs' invention was not of a primary character, and that he was a mere improver of an old machine, defendants relied principally upon British letters patent No. 1,488, for "improvements in the manufacture of chain bands and the machinery applicable thereto," issued to James Lancelott in 1864. James Lancelott was a jeweler, and the object of his invention was to produce a machine to manufacture chain bands for bracelets and such purposes, which should contain 25 coils to the inch, while this woven-wire fabric for bed bottoms usually contains but two or three coils to the inch, and the coils themselves are many times longer than those Lancelott was trying to manufacture. In his specifications, Lancelott describes a device for coiling and cutting the wire at proper times, and provides two coilers, one on each side of the fabric, producing coils alternately, which rendered it unnecessary for him to move the fabric longitudinally in its manufacture, and accordingly he mentions no device for that purpose. The machine of Briggs manufactures the fabric with the use of but a single coiler. To accomplish this result by a single operative machine, mechanical devices to move the fabric the proper distance alternately to and from the coiler, to feed it forward the diameter of a coil at the completion of each successive coil, and to hold the marginal coil in the line of the axis of the incoming coil, so that the latter would engage with each twist of the coil preceding it, were lacking in 1864, when Lancelott completed his invention, and

until 1884, when Briggs perfected his. These devices Briggs supplied, and combined them with the coiler and cutter, which were old, to make a single operative machine. To accomplish this, he provided a box or shell a little longer than the fabric being manufactured, placed the fabric upon it so that the marginal coil would rest by its gravity against the front face of the shell, and put the coiler in a position which enabled it to send the new coil along this face of the shell, so that it would properly engage with the marginal coil. To feed the fabric forward at the completion of each coil, and to hold it in position, he placed a feed shaft within the shell, provided with radial pins arranged in circumferential series at intervals of a few inches, which extended through transverse slots in the shell, and engaged with the fabric above them. By suitably connecting this feed shaft with the driving shaft of his machine, he caused the protruding ends of these radial pins to revolve, at the completion of each coil, a distance equal to the diameter of one coil, thus drawing the fabric forward, and leaving the marginal coil again in proper linear position to receive its successor. To insure the linear position of the marginal coil, he fastened a presser bar of equal length and width with the shell, and provided with a strip of soft rubber, which extended slightly below its front face upon the fabric as it rested on the shell, and thus, by the radial pins and this bar, held it firmly in place, and fed it forward at the proper intervals. To secure the longitudinal movement of the marginal coil alternately to and from the coiler at the completion of the successive coils, he placed this shell, which carried the fabric, upon a frame, and so connected it by suitable mechanical devices with the driving shaft of his machine that, at the completion of each coil, it carried the fabric alternately to and from the coiler one-half the distance between the twists of the coil, and thus placed the marginal coil in the proper position longitudinally to engage with its successor. The mechanical devices by which these results are attained are clearly described and illustrated in the specifications and drawings of complainant's patent.

That this machine of Briggs was constructed and operated is established; but it is urged by defendants' counsel that it was without utility, that it was a mere paper machine, that it never displaced any of the old hand machines, and that defendants' machine is in fact the first and only operative one that has ever been constructed. There is very persuasive evidence in this record in support of this contention, which may go far to limit the damages the complainant can recover in this suit; but I cannot find in the defendants' favor upon this question, because the utility of Briggs' invention is not properly denied in the answer, because complainant's letters patent are *prima facie* evidence of its utility, and because one of the defendants constructed their machine, which is operative and successful, within five years of the date of these letters patent, with these before him for his guidance and direction.

No such result followed the invention of Lancelott. Between 1864, when his letters patent issued, and 1886, when Briggs' machine was patented, no machine was constructed that would automatically

manufacture wire into coiled-wire fabric. This is very persuasive evidence that the practical devices of Briggs for placing and holding the fabric in proper linear position at the completion of each coil were neither described nor suggested by Lancelott. Indeed, the principal, if not the only, value of his specifications and drawings to the skilled mechanic, would seem to have been to teach him to avoid the mistakes of Lancelott, and not to use his pretended improvements. In his machine he placed the fabric between two grooved plates held loosely together with screws, so that the fabric might be pushed through between them. The marginal coil protruded from the edges of the plates opposite his two coilers, which operated alternately, one at each side of the fabric. The only device provided for feeding the fabric forward was a plunger, consisting of a curved bar with teeth, which was made to advance at the completion of each coil, and to push it, and the fabric with which it was connected, forward between the plates. A model somewhat resembling the machine described by Lancelott was produced at the hearing, but after a careful examination of the drawings and specifications of the patent and the testimony of the witnesses, and repeated inspections of this model, I am unable to persuade myself that this device of the Lancelott machine, as a whole, could ever be made to operate successfully in the manufacture of any such woven-wire fabrics as are now in common use. Indeed, it is a conclusive answer to the Lancelott patent here, that it describes no device by which the marginal coil can be moved longitudinally, so that the fabric can be manufactured with a single coiler. This was one great desideratum without which the automatic machine of Briggs could not operate. It is true that there is a suggestion contained in Lancelott's specifications that the coils might be fed from one side of his machine by giving a side movement to the holder and plunger, in order to alternately enter the coils, the one within the other; but this in no way anticipates or detracts from the invention of Briggs. The specifications describe no device for effecting this movement, and amount to no more than the suggestion that must have occurred to every one who saw the manufacture of these fabrics by hand,—that the table on which they were moved might be moved with the fabrics, instead of moving the fabrics on the table. It remained for Briggs to invent a device that accomplished this result, and a machine that embodied it, and successfully manufactured the fabric.

There are two other fatal defects in the machine described in the Lancelott patent: First. His plunger, as it advances, must often force the marginal coil into a cylindrical space so near that of the preceding coil that the succeeding coil cannot engage with it, while the drawing method of Briggs leaves the marginal coil in a cylindrical space the most distant from that of the preceding coil that it is possible for it to keep while woven into it, and just in position to engage with its successor. Second. It is obviously necessary to the successful operation of a wire-weaving machine of the kind under consideration that the axis of the marginal coil should rest in a line parallel to the axis of the incoming coil, because, if it does not, the latter will not engage each twist of the former, but will run out,

and the operation will fail. Not only has Lancelott failed to insure this position of the marginal coil, but the curved plunger with its convex head must absolutely prevent the marginal coil from assuming this position, and thus must insure the failure of his machine to successfully operate. For these reasons it seems clear to me that the Lancelott machine must have been inoperative; that the advance from this crude and worthless machine to the operative machine of Briggs was not the result of a modification or adaptation of the devices of Lancelott, but was the work of invention; and that the letters patent of Lancelott neither anticipated nor suggested the invention of Briggs.

None of the other patents referred to in the answer are worthy of serious consideration here. Only two of them were urged as defenses at the hearing. They were the two patents of William C. Edge,—No. 117,227, granted May 18, 1874, and No. 524,616, granted June 7, 1881. These patents describe a machine for the manufacture of a tubular wire fabric, by which the fabric is fed forward automatically, simultaneously with the addition of each strand of wire. The fabric manufactured upon this machine was not made from coiled wire. The machine itself has neither coiler, cutter, nor any other device adapted to the work of making woven-wire fabric of coiled wire. It was, in effect, a machine for knitting tubular wire fabric, which was carried forward by a slow screw-like movement as it received its increment from an incoming crimped wire. Neither the machine nor the patents upon it contained or described any device for moving longitudinally or forward a flat fabric, or any other device adapted to the manufacture of woven-wire fabric from coiled wire, or suggestive of the devices or machine claimed in complainant's patent. These patents were not material to the issues presented in the case at bar. The result is that Briggs is the original and first inventor of a machine that automatically manufactures coiled-wire fabrics suitable for bed bottoms, mats, and such articles from wire; the letters patent of complainant are entitled to rank as a pioneer patent in the art of manufacturing such woven-wire fabric; and the defendants have infringed the first five claims of these letters patent. *Sewing-Mach. Co. v. Lancaster*, 129 U. S. 263, 272, 9 Sup. Ct. 299; *Consolidated Safety-Valve Co. v. Crosby Steam Gauge & Valve Co.*, 113 U. S. 157, 170, 179, 5 Sup. Ct. 513.

Let the usual interlocutory decree for an injunction and an accounting be entered against them.

SPRINGER LITHOGRAPHING CO. v. FALK.

(Circuit Court of Appeals, Second Circuit. February 9, 1894.)

No. 53.

1. COPYRIGHTED PHOTOGRAPHS—INFRINGEMENT—EVIDENCE—RELEVANCY.

It is immaterial from what source an alleged infringer may have obtained suggestions for making variations in a copyrighted photograph, and hence another photograph, offered in evidence for the purpose of showing that a certain feature was taken from it, is irrelevant.