

WATSON v. STEVENS *et al.*

(Circuit Court of Appeals, First Circuit. September 6, 1892.)

1. PATENTS FOR INVENTIONS—ANTICIPATION—SHANK STIFFENER MACHINES.

In letters patent No. 367,484, issued August 2, 1887, to Jeremiah M. Watson, claim 1 is for a machine for compressing shank stiffeners, having "two rotating die or compressing rollers, the meeting faces of which are formed to present a recess, having one straight and one curved face or side, to thereby curve transversely one face of the stiffener," etc. Claim 6 is for a method of finishing the edges of shank stiffeners, consisting "in cutting out a blank from a sheet of material, leaving the same with beveled edges and obtuse-angled corners, and thereafter passing the same between rolls having dies with rounded edges or margins, in order to round the obtuse angles and beveled portions as cut." *Held*, that the patent was not anticipated by either the "calendering process machine" of the American Shoe Shank Company or the Blake or Tripp machines.

2. SAME—INVENTION—EQUIVALENTS.

In view of the fact that the patented machine is the only one thus far discovered operating with efficiency, rapidity, and economy, and of the other circumstances stated in the opinion, it cannot be held that the patent is void for want of invention over the prior machines having reciprocating instead of rotating dies, although ordinarily the one is only the mechanical equivalent of the other. 47 Fed. Rep. 117, reversed. *Loom Co. v. Higgins*, 105 U. S. 580, applied.

Appeal from the Circuit Court of the United States for the District of Massachusetts.

In Equity. Bill by Jeremiah M. Watson against George H. Stevens and others for infringement of letters patent No. 367,484, issued August 2, 1887, to the complainant for the "method" of, and apparatus for, compressing shank stiffeners. The circuit held that the alleged invention consisted only of the mechanical adaptation of well-known machines and processes to a new use, and dismissed the bill. 47 Fed. Rep. 117. Complainant appeals. Reversed.

In his specifications the patentee makes the following statements:

"Shank stiffeners, as now commonly made, are cut from leather or leather board or equivalent material, so as to leave beveled edges; but previous to applying the same to a boot or shoe it is customary to somewhat shave off or curve the beveled edges at each side of the stiffener, and also to impart a longitudinal curve to the stiffener. This invention has for its object to devise a method of and apparatus for rounding off or curving the beveled edges of the shank stiffeners, and also to give to the same a longitudinal curve before applying the same to a last or shoe. In carrying out this invention a shank stiffener of suitable shape, cut from a sheet of leather board or other material, so as to leave its sides and one end to present beveled edges, the bevel of the edges occupying such relation to the plain surface of the material as to form obtuse-angled corners, and thereafter the blank so formed is subjected to the action of compressing or die rollers, one of which is cut away or recessed to conform in cross section to the shape it is desired to give to the stiffener, the second roll acting to force the stiffener into the said recessed or cut-away part of the other roller, so as to cause the said beveled edges and obtuse-angled corners to be broken down into a round or curve, as will be described. The machine herein shown has two rotating die or compressing rollers, combined with feeding devices for feeding the shank stiffeners to the die or compressing rollers. The parts are all preferably made adjustable, and, if desired for different-sized shank stiffeners, the recessed roller may be removed, and another substituted for it having a recess of a different size or

shape. * * * The shank stiffener compressed as described is very stiff, as the material which is ordinarily shaved off and thrown away is pressed into the main part of the shank stiffener."

The first and sixth claims, which are here in issue, read as follows:

"(1) In a machine for compressing shank stiffeners, two rotating die or compressing rollers, the meeting faces of which are formed to present a recess having one straight and one curved face or side, to thereby curve transversely one face of the stiffener, combined with means for rotating the said die rollers, and a lifting plate to assist in curving the said shank longitudinally, substantially as described."

"(6) The herein described method of finishing the edges of shank stiffeners, which consists in cutting out a blank from a sheet of material, leaving the same with beveled edges and obtuse-angled corners, and thereafter passing the same between rollers having dies with rounded edges or margins, in order to round the obtuse angles and beveled portions as cut, substantially as described."

Frederick P. Fish and William K. Richardson, for appellant.

William A. Macleod, for appellees.

Before GRAY, Justice, and COLT and PUTNAM, Circuit Judges.

PUTNAM, Circuit Judge. This suit relates to the first and sixth claims of complainant's patent. The first is for a combination constituting a machine for compressing shank stiffeners, and the other is for the "method" of that machine. Two defenses are set up,—anticipation by certain patents put in evidence, and lack of invention.

None of the devices in use for forming shank stiffeners, shown in the case, anticipated the complainant's invention. This is plainly apparent as to all, unless it be the calendering process machine originating with the American Shoe Shank Company, the Blake or Tripp machines, or those with reciprocating dies. The calendering process was devised before shanks were made from leather board, for finishing up shanks molded from wet substances. This machine in no way contemplated the use of the power required to effectually mold dry and compact substances like leather board. The purpose of the original Blake machine was to form shanks by skiving. Although possibly it might have been strengthened, and its forms then used as stamping dies, yet it contained no suggestion of any such purpose. *Topliff v. Topliff*, 145 U. S. 156, 161, 12 Sup. Ct. Rep. 825. The Tripp machine was designed originally for shaping and smoothing soles of boots and shoes. By changing its molds, it was in fact adapted to shanks, yet this was subsequent to the complainant's alleged invention; and its complicated parts, with its slow production, contained no suggestion of his simple and rapid mechanism. The prior use of reciprocating dies is clearly proved.

That portion of the first claim which relates to the lifting plate clearly does not require the attention of the court; and the case, therefore, comes down to the question of a patentable difference between machines operated for forming shank stiffeners from leather board, and perhaps from like substances, by the use of direct pressure, and those using reciprocating dies. If it can be doubted that, prior to the complainant's

alleged invention, reciprocating and rotating dies were for very many purposes substitutes for each other, well known in the mechanical arts, so that ordinarily no substantial novelty could be involved in interposing one for the other, this is sufficiently proven by the testimony of Joseph P. Livermore, as follows:

"Both of these modes of operation of dies intended to compress, mold, or shape materials or articles similar in their nature to shank stiffeners, [that is, using rolling dies and using reciprocating dies,] were employed in machines long prior to the time of the Watson patent, and are, in my opinion, well-known substitutes, the one for the other."

The result is that, if the court finds any patentable invention in the complainant's machine or "method," it must be in the face of the fact that the like had been in prior use for making shank stiffeners, except only the substitution for this specific purpose of rotating for reciprocating dies, each being ordinarily equivalents for the other.

The following are among the latest expressions of the supreme court on this topic:

"The elements combined to form the alleged invention merely constituted an aggregation of old devices, each working out its own effect, without producing anything novel; and such an assemblage or bringing together of old devices, without securing some new and useful result as the joint product of the combination,—something more than a mere aggregation of old results,—does not constitute a patentable invention." *Adams v. Stamping Co.*, 141 U. S. 589, 542, 12 Sup. Ct. Rep. 66.

"While the promotion of an old device, such, for instance, as a torsional spring, to a new sphere of action, in which it performs a new function, involves invention, the transfer or adaptation of the same device to a similar sphere of action, where it performs substantially the same function, does not involve invention." *Western Electric Co. v. La Rue*, 139 U. S. 601, 606, 11 Sup. Ct. Rep. 670.

Ansonia Co. v. Electrical Supply Co., 144 U. S. 11, 12 Sup. Ct. Rep. 601, cites and approves (page 18) the language of the *Locomotive Truck Co. Case*, 110 U. S. 490, 4 Sup. Ct. Rep. 220, now a leading one, as follows:

"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."

The supreme court, however, has given a caution that no general statement of rules relating to this topic can be followed with safety, unless its limitations and practical application are tested by the special facts of the cases in which used, and also of those into which it is to be imported:

"The truth is the word [meaning "invention"] cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not. In a given case we may be able to say that there is present invention of a very high order. In another we can see that there is lacking that impalpable something which distinguishes invention from simple mechanical skill. Courts, adopting fixed principles as a guide, have by a process of exclusion determined that certain variations in old devices do or do not involve invention; but whether the

variation relied upon in a particular case is anything more than ordinary mechanical skill is a question which cannot be answered by applying the test of any general definition." *McClain v. Ortmyer*, 141 U. S. 419, 427, 12 Sup. Ct. Rep. 76.

In *Loom Co. v. Higgins*, 105 U. S. 580, the supreme court determined in favor of a certain "new and useful result" arising from an aggregation of old elements as sufficient to sustain patentability, although there was in that case no "new function," no "new sphere of action," and no "substantially distinct result," as each of these expressions might sometimes well be understood. The court said (page 591) as follows:

"It was certainly a new and useful result to make a loom produce fifty yards a day when it never before had produced more than forty; and we think that the combination of elements by which this was effected, even if those elements were separately known before, was invention sufficient to form the basis of a patent."

In this case the conclusion was aided by the line of reasoning on page 591, as follows:

"It is further argued, however, that, supposing the devices to be sufficiently described, they do not show any invention; and that the combination set forth in the fifth claim is a mere aggregation of old devices, already well known, and therefore it is not patentable. This argument would be sound if the combination claimed by Webster was an obvious one for attaining the advantages proposed,—one which would occur to any mechanic skilled in the art. But it is plain from the evidence, and from the very fact that it was not sooner adopted and used, that it did not, for years, occur in this light to even the most skillful persons. It may have been under their very eyes; they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value, and to bring it into notice."

This last citation, and the determination in *Loom Co. v. Higgins*, are repeated and approved as late as in *The Barbed-Wire Patent*, (*Washburn & Moen Manuf'g Co. v. Beat 'Em All Barbed-Wire Co.*) 143 U. S. 275, 283, 12 Sup. Ct. Rep. 443: While the supreme court gives to the fact of the mere salability of a product very little weight, if any, on the question of invention, (*Magowan v. Belting, etc., Co.*, 141 U. S. 332, 12 Sup. Ct. Rep. 71; *McClain v. Ortmyer, ubi supra*; *Adams v. Stamping Co., ubi supra*.) yet in *Smith v. Vulcanite Co.*, 93 U. S. 486, 495, it used, with other expressions in the same direction, the following:

"We do not say the single fact that a device has gone into general use, and has displaced other devices which had previously been employed for analogous uses, establishes in all cases that the latter device involves a patentable invention. It may, however, always be considered; and, when the other facts in the case leave the question in doubt, it is sufficient to turn the scale."

This was repeated in *The Barbed-Wire Patent*, page 284, 143 U. S., and page 447, 12 Sup. Ct. Rep., and is therefore the latest expression of the supreme court on this particular topic. The same class of facts which received attention in *Loom Co. v. Higgins*, and *Smith v. Vulcanite Co.*, had recognized weight in *The Barbed-Wire Patent, supra*, and also in *Gandy v. Belting Co.*, 143 U. S. 587, 12 Sup. Ct. Rep. 598, and *Topliff v. Topliff*, 145 U. S. 156, 164, 12 Sup. Ct. Rep. 825.

We conclude, therefore, that in applying to cases of doubt the primary rules touching what constitutes invention, and the secondary rules touching what is a "new and useful result," a "new function," or a "new sphere of action," we may be influenced by the facts that the improvement in question, although desired for years, was not secured until brought out by the patentee; that the product of the improved machine or process went into general use by the manufacturers for whom it was intended, and displaced wholly or in a very large degree prior products; and that, while all prior products had been unsuitable, either through lack of cheapness or adaptation, the new product answered all reasonable requirements.

Prior to the first use of leather board, about 1869, S. P. Rogers & Co. had made shanks from the wet stock of that substance as it came from the paper machines, running it through the calendering process of the American Shoe Shank Company, already referred to. This operation required several different steps, namely, cutting the wet stock into blanks; molding them into form by the "hammer machine;" drying, during which they shrank and curled; and calendering them in the molds of the machine of the American Shoe Shank Company. This was a complicated, slow, and expensive process, and there is evidence that the product lacked uniformity. Certain it is that after 1878 this was abandoned, and was succeeded by the working of leather board, first with skiving machines, and then with reciprocating dies. The evidence is that these later products were not satisfactory to the trade, and the processes were slow.

The complainant testified—and his testimony on this point is in harmony with the entire record—that he continued the reciprocating dies until 1886, only because he knew of no better method. He further testified—and on this point he was not contradicted—that in 1885 the demand for better and more uniform shanks led him to experiment with rotary molds, and that this resulted in a complete success. On this he based his patent, built at first one machine and then others, and at the time of giving his testimony was producing several hundred thousand shanks weekly, mainly from these machines, although to some extent, for special reasons, he was still using reciprocating dies. He further testified that he knew of no method of producing shanks demanded by the trade except this, and the record sustains him.

It appears that the respondents since this bill was filed commenced again using reciprocating dies; but, without accepting certain refinements and theories interpolated by the witnesses for the complainant, the case is clear that his machines are the only ones so far discovered operating with efficiency, rapidity, and economy. It is evident the case is closely balanced; but we have weighed the circumstances preceding and attending the production of the complainant's machine, and the results which have followed it, in the light of *Loom Co. v. Higgins, supra*, and of other cases in which its line of reasoning has been recognized or approved; and we have concluded that the circumstances and results referred to prohibit us from depriving the patentee of the presumption arising from the fact

that the patent office recognized him as an inventor, and issued him a patent.

Standing by themselves, the complainant's claims are too broad to be sustained; but, by reading into them his specifications, they are limited to producing shank stiffeners from leather board, leather, or like material. The only question raised in this case, or, indeed, by the present state of the art, relates to leather board; and we therefore limit our conclusions to this substance, without inquiring concerning leather or other material like leather board or leather.

The decree of the circuit court is reversed, the first and sixth claims of complainant's patent are sustained for use in producing shank stiffeners from leather board, and the case is remanded to the circuit court, with instructions to enter a decree for the complainant for an accounting and for a perpetual injunction against making, vending, or using, for producing shank stiffeners from leather board, any machine or method infringing the first or sixth claims, and for other proceedings in conformity with this opinion; the complainant to recover his costs in this and the circuit court.

JOHNSON CO. v. PACIFIC ROLLING MILLS CO.

SAME v. SUTTER ST. RY. CO.

(Circuit Court of Appeals, Ninth Circuit. July 18, 1892.)

Nos. 33, 34.

PATENTS FOR INVENTIONS—PATENTABILITY—INVENTION.

Letters patent No. 272,554, issued February 20, 1883, to Tom L. Johnson for a street railroad rail, combining the principal features of the tram and T rails, but with a different disposition of metal and combination of parts, so as to allow the advantage of even fish plating, are void for want of patentable invention, as the change in form was merely the result of mechanical skill. 47 Fed. Rep. 586, affirmed.

Appeal from the Circuit Court of the United States for the Northern District of California.

In Equity. These are two suits brought by the Johnson Company against the Pacific Rolling Mills Company and the Sutter Street Railway Company, respectively, for infringement of letters patent No. 272,554, issued February 20, 1883, to Tom L. Johnson for street railroad rails. The circuit court dismissed the bills, holding that there was no infringement, and that the patent was void for want of invention. See 47 Fed. Rep. 586, where a full statement of the facts will be found in the opinion delivered by HAWLEY, J. Complainant appeals. Affirmed.

George Harding, George J. Harding, and Wm. F. Booth, for appellant.
M. A. Wheaton, I. M. Kalloch, and F. J. Kierce, for appellee.

Before McKENNA and GILBERT, Circuit Judges, and DEADY, District Judge.