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ROYER *v.* ROTH.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR
THE DISTRICT OF CALIFORNIA.

No. 83. Submitted November 7, 1889. — Decided November 25, 1889.

The claim of letters patent No. 172,346, granted to Herman Royer, January 18, 1876, for an improvement in machines for treating rawhides, namely, "In combination with the drum A of a rawhide fulling machine, operating to twist the leather alternately in one direction and the other, a shifting device for the purpose of making the operation automatic and continuous, substantially as described," does not cover any patentable combination, it being a mere aggregation of parts.

The automatic shifting device was old, as attached to a washing machine, and there was no modification of its action produced by attaching it to the fulling machine. Therefore, its application to that machine did not require the exercise of invention.

IN EQUITY for the infringement of letters patent. Decree dismissing the bill, from which plaintiff appealed. The case is stated in the opinion.

Mr. M. A. Wheaton, for appellant, submitted on his brief.

Mr. Manuel Eyre, for Roth, appellee, submitted on his brief.

MR. JUSTICE BLATCHFORD delivered the opinion of the court.

This is a suit in equity, brought in the Circuit Court of the United States for the District of California, by Herman Royer against Solomon Roth and L. P. Degen, to recover for the infringement of letters patent No. 172,346, granted to the plaintiff January 18, 1876, on an application filed November 15, 1875, for an improvement in machines for treating rawhides.

The bill states that the invention consisted in "combining with the drum of a rawhide fulling machine, operating to twist the hide alternately in one direction and then in the other, a shifting device for the purpose of making the operation automatic and continuous."

Opinion of the Court.

Each defendant put in a separate answer denying that the plaintiff was the inventor of such shifting device, and alleging want of novelty, with proper averments.

After a replication to the answers, proofs were taken, the case was brought to a hearing, and the Circuit Court dismissed the bill. The decree states that the plaintiff first conceived of the combination of an automatic reverser attached to the drum of a rawhide fulling machine, operating to twist the leather in one direction and the other, for the purpose of making the operation automatic and continuous, as described and claimed in the patent; that, at the request of the plaintiff, one Clerc, a mechanic, made the automatic reverser described in the patent, and, in October, 1867, delivered the same to the plaintiff, who attached it to his fulling machine; that the combination was new with the plaintiff, and was useful, and his use thereof was secret until he applied for the patent; that it was not obvious and was not known whether the new combination could be used successfully for the practical treatment of rawhide, which was the work for which the combined machine was intended, until after it had been tested and tried by the plaintiff; that it was obvious to any skilled mechanic that an automatic reverser could be applied to the drum of a rawhide fulling machine so as to make it reverse its motion automatically at any desired fixed intervals; that the patent does not cover any patentable invention; and that, for that reason alone, the bill is dismissed.

The specification says: "The object of my invention is to provide an improvement in a rawhide fulling machine, for which letters patent were granted to me, and it consists in an automatic device by which I am enabled to run the machine in one direction for a sufficient length of time and then reverse it, this process continuing automatically until the leather is finished."

The drawings show the machine as operated by belts, but the specification states that gears or friction couplings could be used if desired, and the action of the machine still be automatic. The machine employed for fulling rawhides, or forming them into leather, has a drum, A, the central shaft of

Opinion of the Court.

which has upon its lower end a bevel gear. With this gear two pinions mesh at opposite sides, one of the pinions being mounted upon a solid shaft, which passes through the hollow shaft of the other pinion, and has a driving pulley keyed to it. Another driving pulley is keyed to the hollow shaft, and a loose pulley runs between them. When the belt turns one of the keyed pulleys, the machine will operate in one direction, and when the belt is shifted to the other keyed pulley, it will operate in the opposite direction. In order to make such action automatic, there is a belt-shifter, which is a part of, or attached to, a sliding bar. That bar is operated by a lever, which is hinged or pivoted, and works in a slot or link upon the bar, so that when turned from side to side it will slide the bar in one direction or the other. A weight is secured to the top of the lever, so that as soon as the lever passes the centre it will fall by its own weight and suddenly shift the belt. In order to operate this lever, there is another sliding bar, which moves below and parallel with the sliding bar first mentioned, the second bar having pins upon each side of the lever, so that when the second bar is moved it will shift the lever. The second bar has a nut projecting downward from it, and there is a screw formed upon a horizontal shaft so as to fit the nut. A belt from a pulley on the solid shaft extends to a pulley on the last-named horizontal shaft, and by its action the screw will be turned in one direction until the lever has passed the centre and fallen over so as to shift the belt to the other pulley, when the whole mechanism will be moved in an opposite direction until the screw has again moved the second sliding bar and reversed the lever. The specification states that the machine is thus made automatic in its action, and can be left until the work is entirely finished; and that a frictional coupling or reversing gear might be used in place of a belt, but would not work as well.

The claim of the patent is as follows: "In combination with the drum A of a rawhide fulling machine, operating to twist the leather alternately in one direction and the other, a shifting device for the purpose of making the operation automatic and continuous, substantially as described."

Opinion of the Court.

The evidence is conclusive that one Clerc, as early as 1864, in San Francisco, made an automatic shifting device the same as that described in the patent, and attached to it a washing machine, and continued from that time to make such automatic reversers and put them into use; and that, in 1867, at the request of the plaintiff, he made the shifting device described in the patent, which the plaintiff attached to his fulling machine. The only difference between the shifting device made by Clerc for the washing machines, and that made by him for the plaintiff, was that in the washing machine reverser the screw-shaft was driven by two gears, one on each end of it, while the one described in the patent is driven by a belt; and that the washing machine was horizontal, while the plaintiff's machine was upright, in consequence of which the horizontal machine required a spur gear, while the upright machine had a bevel gear. But these changes were such as any skilful mechanic could make. The plaintiff, in giving his order to Clerc to make the reverser, gave him no directions as to how to construct it, and only gave him a drawing of the fulling machine to which it was to be attached.

The operation of the automatic reverser in connection with the fulling machine is precisely the same as its operation in connection with the washing machine, or with any other machine to which it can be applied. There is no modification of its action produced by attaching it to the fulling machine.

The plaintiff testifies that, before he had the automatic reverser, his fulling machine would run in one direction until the belt was shifted by hand; that if the hides got too hot he had to stop the motion and reverse it; and that he had also to stop the action of the machine when the automatic reverser was attached to it, if the hides got too hot. It also appears, from the plaintiff's testimony, that from 1867, when he attached the automatic reverser to his machine, he was occupied for four years in experimenting with the machine, before he perfected the process of fulling the hides so that the machine would turn out satisfactory work regularly and smoothly; that the difficulty was not with the automatic reverser, because that worked and reversed in the same manner when first attached, in 1867,

Opinion of the Court.

that it did in 1871; that the difficulty with the machine, which caused these experiments occupying four years, was that the hides would not double backward uniformly; that when they were wedged or packed the automatic reversing apparatus would not stop the machine or reverse it soon enough to prevent injury; that the hides would double twice, and would tear off from the shaft before the machinery could be stopped; that the machine would often reverse before the unwinding was completed, and thus the enlargements of the two folds or doubles would meet, and the hides be torn from the shaft; that as yet he had not perfected any process for satisfactorily producing the article now known as fulled rawhide; that to do so he varied the condition of the hides as to moisture, until he found that, at the right degree of dampness, the hides would double backward with practical regularity; that he also several times changed the means by which he fastened the hides to the shaft; that to make the article in question, the hides had to be made soft and pliable by being subjected to a severe and long-continued mechanical operation, such as twisting or doubling back and forth; that, to do this, the hides had to be in a certain condition as to moisture, neither too dry nor too wet; that he had, therefore, to experiment by changing the degree of moisture by slight variations, until he found the proper degree; that he had to discover some mechanical means by which all parts of every hide could be subjected to an equal and uniform amount of mechanical action, so that no hard spots would be left in the hide; that, some parts of a hide being three times as thick as other parts of the same hide, it was difficult to discover whether there was a degree of moisture at which the hides could be successfully treated in the machine, because it took much more soaking to moisten the thick parts of the hide than it did the thin; that he finally learned how to moisten the entire hide uniformly by peculiar ways of folding it while being moistened, and hanging it so that some parts of the hide would be longer in water than other parts; that there was also a great difference in the texture of different parts of a hide; that no two hides are alike as to thickness and texture; and that he did not overcome these difficulties until 1871.

Opinion of the Court.

It is quite apparent, from this recital of the difficulties encountered by the plaintiff, none of which are alluded to in the specification of the patent, that if he invented anything patentable, it consisted in some process of treating the hides, so as to produce the merchantable article of fulled rawhide. But there is no suggestion of any such invention in the specification or the claim.

There is no patentable combination of the automatic shifting device with the drum of the fulling machine. It is a mere aggregation of parts. The shifting device operates automatically to reverse the action of the fulling machine in precisely the same way that it operates when applied to any other machine; and, the shifting device being old, its application to the fulling machine did not require the exercise of invention. *Double Pointed Tack Co. v. Two Rivers Manufacturing Co.*, 109 U. S. 117, 120, 121.

The same view was taken of this patent by Judge Drummond in the case of *Royer v. Chicago Manufacturing Co.*, 20 Fed. Rep. 853, decided by him in the Circuit Court of the United States for the Northern District of Illinois, in June, 1884, in which he held that the invention was not patentable, because it was merely the application of an old device used in connection with a washing machine to an analogous use.

The principle has been applied by this court in various cases. *Pomace Holder Co. v. Ferguson*, and cases there collected, 119 U. S. 335, 338; *Thatcher Heating Co. v. Burtis*, 121 U. S. 286, 295; *Dreyfus v. Searle*, 124 U. S. 60; *Hendy v. Miners' Iron Works*, 127 U. S. 370, 375.

Decree affirmed.