

Case No. 4,978.
[1 Curt 279.]¹

FOSTER v. MOORE.

Circuit Court, D. Massachusetts.

Oct. Term, 1852.

PATENTS—EVIDENCE ENTITLING PATENTEE TO IN
JUNCTION—INFRINGEMENT—SUBSTITUTION—COMBINATION.

1. An exclusive possession of about eight years, under a patent for a useful machine, affecting the business of a large class of persons, is sufficient prima facie evidence to entitle the patentee to an injunction previous to a trial at law.

{Cited in *Sargent v. Seagrave*, Case No. 12,365; *Earth-Closet Co. v. Fenner*, Id. 4,249;

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Corbin Cabinet Lock Co. v. Tale & Towne Manuf'g Co., 58 Fed. 565.]

2. The mere substitution of one known device, for another, though complex, is an infringement.

[Cited in *Holly v. Vergennes Mach. Co.*, 4 Fed. 80; *Wilt v. Grier*, 5 Fed. 453; *Yale Lock Manuf'g Co. v. Norwich Nat. Bank*, 6 Fed. 389.

[Cited in *Jackson v. Allen*, 120 Mass. 75.]

3. What is technically a combination, and how it may be infringed, though improved.

[Cited in *Wallace v. Holmes*, Case No. 17,100; *Waterbury Brass Co. v. Miller*, Id. 17,254; *Saxe v. Hammond*, Id. 12,411; *Cochrane v. Deener*, 94 U. S. 788; *Milner v. Sehnfield*, Case No. 9,609a.]

This was a suit in equity [by George Foster against Abner S. Moore] founded on letters-patent [No. 3,857] granted to Richard Richards, on the 16th day of December, 1844, for "improvements in machinery for cutting leather into soles." The letters-patent had been assigned to the complainant. The specification was in the following words: "To all Persons to Whom These Presents shall Come: Be it known that I, Richard Richards, of Lynn, in the county of Essex, and state of Massachusetts, have invented certain improvements in machinery for cutting leather into soles, and that the following description and accompanying drawings, taken in connection, constitute a full and exact specification of the construction and operation of my said invention: Figure 1, of the drawings above mentioned, represents a top view of my machine. Figure 2, is a side elevation. Figure 3, is a longitudinal vertical and central section. Figure 4, is an elevation of the end nearest to the cutting knives. Such other drawings as maybe necessary to the following description will be referred to and described therein. So far as my machine consists of one or more cutters, suitably arranged in frame-work, and capable of being raised from, and depressed upon a platform beneath them, for the purpose of supporting the leather during the operation of cutting, it does not differ from many other machines in common use. A, Figures 1, 2, 3, is the frame work or table, which sustains the operative parts, and within which a frame B, is arranged in the position as seen in the drawings, and sustained in suitable bearings, in which it may be freely moved up and down in a vertical direction,—the object of the frame being to carry and elevate and depress the cutters. The frame B, is operated by the foot of the attendant, applied upon a treadle C; the said treadle being connected to the frame B, by a suitable roll D, jointed at its lower extremity to the treadle, and at its upper to the frame—the same being seen in Figure 3. A curved arm E, projects upwards from the treadle, and has at its upper end a projection a, to which one end of a strap b, is attached; the said strap being wound around and attached at its other end to a pulley or drume, fixed upon a main transverse shaft d, upon which is a fly-wheel e. Another strap f, is attached at one end to, and wound around the drum c, in a reverse direction to that of the strap b, and extends downwards, and is secured at its other end to the treadle, so that the movement of the treadle by the foot causes a motion, first in one direction, and next in the opposite, of the balance or flywheel e. A small pulley g, is

fixed upon one end of the shaft d; a strap or band h, being attached to the periphery of the pulley, and passing partly around it, thence upwards, in contact with a guide pulley, thence over a pulley k, and thence downwards, and having a weight I, appended to it as seen in the side elevation. The pulley k, runs loose upon the end of the knife or cutter shaft m, and has a small dog or pawl n, jointed to its side, and pressed against the toothed circumference of a ratchet wheel o, by a spring p,—the ratchet wheel being fixed upon the end of the cutter shaft. The cutter shaft m, turns or revolves in suitable bearings, in the frame B. It has the holders or plates qq, of the two cutters or bent knives r, s, confined upon it between its bearings, as seen in the drawings. Each of said holders is formed rectangular in its cross section, and rests upon the shaft, which is formed to receive it; the one holder with its knife being directly over the other, and its knife,—that is to say, the holders being on opposite sides of the shaft, and so arranged that the two knives, which are to be curved alike, shall be brought into line transversely with each other, throughout the curves of both. The two holders of the knives turn midway between their ends upon a pint, which extends through, and is fixed in the cutter shaft and projects from the same into each holder, so that when the end of one, or adjacent ends of both of the holders, is moved transversely in one direction, the other end of the same, or other adjacent ends of both, will be equally moved in an opposite direction, thus enabling us at any time to narrow or widen the toe or heel of the sole as occasion may require. The adjacent ends of the cutter holders are confined down upon the shaft by a screw u or v, which passes through one of the holders and the shaft, and is screwed into the other holder,—there being an elongated slot or opening formed transversely through the shaft for each screw to pass and move through, when the adjacent ends of the cutter holders are moved to the right or left transversely. Figure 5 denotes a vertical cross section of the cutter shaft and cutter holders taken through one of the confining screws, and its slot, u, being the screw, and w the slot On the end of the cutter shaft, opposite to that on which the loose pulley is placed, a circular plate x is fixed,—the said plate having two notches formed in its circumference on opposite sides of its centre, and at one hundred and eighty degrees distant from the centre of one to that of the other; the said notches being arranged in a vertical line with each other. An end view of this plate is given in Figure

6, in which one of the notches is seen at y, the other being covered by the lower end of a slide z, which is adapted to the surface of the plate so as to play up and down vertically,—the length of the said slide being equal to the diameter of the plate, diminished by the depth of one of the notches. A latch a^1 is arranged horizontally over the cutters and turns on a fulcrum or joint at b^1 , in such manner as to allow its end over and which is in contact with the circular plate x, to play up and down vertically. A stud, or other analogous contrivance, c^1 , projects vertically from the frame A, directly underneath the slide Z, and has its top graduated or situated at such a distance from the lower end of the slide, that when the frame B descends, so as to carry either one of the cutters through the leather to be cut, the said stud will come into contact with the slide, and elevate the same to such extent as to throw the latch a^1 out of the notch, and thereby permit the cutter shaft to be partially revolved so as to bring the knife which was previously upwards into the position of the one which last performed its cutting operation, and thereby turn the circular plate so as to cause the latch to fall into the other notch. The partial revolution of the cutter shaft is effected by the treadle when it rises, acting through the arm E, and the mechanism directly intervening between it and the cutter shaft. When the treadle is depressed, the loose pulley upon the cutter shaft carries the dog or pawl over the teeth of the ratchet wheel O; that is to say, causes it to slip or slide over the same, but the instant the direction of the pulley is reversed by the band h, which is wound upon the pulley g, the dog acts in the teeth of the ratchet wheel and turns the cutter shaft. The leather to be cut into soles being previously reduced to a proper width, is placed upon the table or platform G, and between parallel guides H H. It is pressed forward beneath the cutting knife until it comes into contact with a vertical gauge plate K, which extends downwards from a horizontal shaft L, supported and moving in bearings M M, in a frame N, which is capable of being moved towards or from the cutter by a screw O, or any other suitable contrivance. The shaft L, has a bent lever P, fixed upon one end, as seen in Figures 1, 2, the said lever extending in one direction towards and underneath the cutter shaft, and being borne up against the said shaft by a weight Q, applied upon its opposite end. From the above it will be seen that the depression of the frame B, will cause the end of the lever P, first mentioned, to descend, and thereby turn the shaft L, a little in its bearings, in such manner as to cause the lower end of the gauge plate to move in a direction away from the cutter, and allow the piece of leather separated from the sheet thereof to fall freely away from the same and drop upon an inclined plane B, over which it slides out of the machine. Having thus described my machinery, that which I claim is as follows, namely: I claim the above specified manner of operating the cutting knives r, s, applied upon the revolving shaft m, namely: the arranging said knives as described upon a revolving shaft and causing them and the shaft to be partially revolved at suitable periods of

time in the manner as set forth, so as alternately to bring each cutting knife in succession into the required position for it to cut through the leather when depressed by the frame or mechanism by which it is made to act upon the same. I also claim, in combination with the above, giving to the gauge plate (K) at the time of, or soon after the depression of either knife into the leather, a motion in a direction away from the cutting knives in order to permit the piece of leather separated from the sheet thereof to fall freely away from the same, as described. I also claim the combination of mechanical parts by which the requisite degrees of rotary motion of the shaft which carries the cutting knives, are determined in the manner hereinbefore described, the said parts being the notched circular plate x, applied upon the rotary cutter shaft, the catch or latch a¹, the slide Z upon the circular plate, and the fixed stud, or other analogous contrivance, by which the slide" is moved when the knife frame is depressed; the whole being applied and operating substantially as described. I also claim, attaching the knife holders to the revolving shaft m, in such manner as to admit of a corresponding movement of their adjacent ends, in transverse direction, at one and the same time, and the fixing the said ends afterwards to the shaft, the same being for the purpose of narrowing or widening the toe or heel of the sole as set forth. In testimony that the above is a correct specification, I have hereto set my signature this twenty-first day of September, A. D. 1844. Richard Richards. Witnesses, R. H. Eddy. John Noble."

The complainant alleged that each of the things specifically claimed were used by the defendant. A machine constructed according to the specification, and also the machine complained of, were produced, and affidavits of experts were made by each party. The motion was for a preliminary injunction, founded on long possession under the patent, and an allegation that the defendant's machine was an infringement

G. T. Curtis, for the motion.

R. Choate, contra.

CURTIS, Circuit Justice. The first question is, whether the complainant has shown such a prima facie title to the things patented, as will enable him to call on the court to protect his right until it can be tried. The affidavit of Pillsbury states that the patentee, and those claiming under him, have been engaged in building these machines since the letters-patent were granted, a period of about eight years. That, during this

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time, they have made and sold upwards of one hundred and fifty of these machines, and they have been put in use in Massachusetts, Maine, Ohio, Pennsylvania, and other parts of the country. That about fifty of these machines are now in daily use at Lynn, in Massachusetts, the place where they were originally introduced. And that, except in this case, the witness has not known the novelty, or validity of Richards's patent disputed; nor has he known any attempt made to infringe it. No conflicting evidence has been introduced by the defendant, tending to show that the possession of the patentee has been questioned, or interrupted, or that it has not been as extensively enjoyed as this witness declares; nor is the validity of the patent denied by any affidavit of the defendant

This is such a prima facie title as a court of equity is bound to protect. The familiar rule stated by Lord Eldon, in *Hill v. Thompson*, 3 Mer. 622, is, that when a patent has been granted, and there has been an exclusive possession of some duration under it, the court will enjoin, without putting the party previously to establish his right at law. And this rule has been followed in this and other circuits, and is well established in England. *Isaacs v. Cooper* [Case No. 7,096]; *Washburn v. Gould* [Id. 17,214]; *Orr v. Littlefield* [Id. 10,590]; *Bickford v. Skewes*, *Webst Pat Cas.* 211; *Neilson v. Thompson*, Id. 277. It is not possible to fix any precise term of years during which the exclusive possession must have continued. The reason for the presumption in favor of the validity of the grant is, the acquiescence of the public in the exclusive right of the patentee, which, it may reasonably be assumed, would not exist unless the right was well founded. And it is obvious, that this public acquiescence is entitled to more or less weight, according to the degree of utility of the machine, and the number of persons whose trade, or business are affected by it. I am satisfied that this is a useful machine, not only because it is so stated by Pillsbury, but from the number which are now in use; and there can be no doubt that it affects the trade and business of a numerous and intelligent body of persons in this and other states. In a case where, though the validity of the patent has been questioned, no specific and satisfactory ground of doubt has been laid by the defendant, this acquiescence, for a period of about, eight years, dispenses with the necessity of bringing an action, at law, before moving for a preliminary injunction. But the complaint must show an infringement by the defendant; and the next question is, if he has done so.

In this, as in other patent cases, this is a complex question, partly of law and partly of fact; and in this, as in most patent cases, when the law has been determined and applied, the facts do not present great difficulties. The first inquiry is, what is claimed? and the second, has the defendant used what is claimed? The construction of the claim is matter of law. It has been argued that the first claim is for an abstraction. I do not so consider it. The claim is, of the described means of arranging the knives on a shaft, and causing them to revolve and be depressed, so as to produce certain effects; and this is, in substance, a claim of certain mechanism, described in the specification, so combined and arranged,

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as is therein shown, and adapted to produce specific effects. In point of form, I see no sound objection to the claim. Laying aside, for the present, the last claim, which is for the attachments of the knives, I find the mechanism claimed, consists in a revolving shaft having two knives placed upon it in a particular manner, and in the means of working this shaft, and, in combination with these, the means of giving to the gauge plate certain movements. It has not been denied, that the gauge plate itself, in the defendant's machine, and the means of moving it, so as to allow the soles, when cut, to fall out of the machine, are substantially the same as in the plaintiff's; and, indeed, an inspection of the two machines can leave no reasonable doubt on this point. It is true, the defendant's has a screw, by means of which the gauge plate may be moved, so as to adapt it to different sizes of soles; but this is plainly an addition to, and not an alteration of, this part of the thing patented, which does not consist in the gauge plate itself, or the means of graduating it, but solely in the means of communicating to it the rocking motion which allows the escape of a sole when cut, and then brings the plate into position to act as a gauge.

But it is correctly argued that even if the patentee was the original inventor of this means of giving this motion to the plate, and the defendant has used it still, as it is claimed only in combination with the shaft and knives, and mechanism to move them, unless the defendant uses these also, he does not infringe; because these are, undoubtedly, an essential part of the combination, and if the whole, in substance, is not used, there is no infringement. And, therefore, it is necessary to see whether the defendant has infringed upon what is first claimed. That he uses a shaft, with knives attached to it in the same manner as is described in the plaintiff's specification, is clear. Here, also, he has added a screw, by means of which the knives may be moved, when the screws which attach the knives to the shaft by compressing the knife-holders, are loosened. But this does not affect the arrangement of the knives on the shaft. It is an addition to, and not an alteration of, the thing patented. But the real question is whether the defendant's means of working the shaft are, within the patent law, substantially the same as the plaintiff's. These means may be considered under two

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heads: namely, the mechanism by 'which the shaft is rotated and depressed, and that by which the degrees of rotary motion, requisite to bring the knives into the position to cut, are determined, and the revolution arrested and the shaft held while the cut is made, and then released. As to the first, Mr. Robert H. Eddy, whose affidavit is adopted by Mr. Thomas Blanchard, as correccuy expressing his views, says: "I do not perceive any thing essentially new, or not well and long known to mechanics, in the machinery used to rotate the shaft in the defendant's machine; nor does it seem to me to be so practically useful as that used by Richards for such purpose. The invention of Richards, namely, the arranging the knives upon a revolving shaft, and causing them and the shaft to be partially revolved, at suitable periods of time, in the manner as set forth in Ricbards's specification, namely, on its axis, so as to bring the knife, which was previously upwards, into the position of the one which last performed its cutting operation, is, in my judgment, identical with that "adopted in the machine seen at the shop of said Moore," (that is, the defendant's machine.) "The vertical and intermittent movements of the knife-shaft are produced by machinery, which may be considered as common and well-known mechanical equivalents for those described in the said specification of the said Richards." No affidavit made by the defendant contradicts this; for though, as will presently be noticed, his experts declare that the two machines, in their opinion, are not substantially the same; they do not say that the defendant's devices are not well-known means of accomplishing the same ends effected by Richards. Indeed, in the written argument for the defendant, it is not insisted, that there is a substantial difference between the machines in this particular. The position there taken is, "that the combination of mechanical parts, whereby the degree of rotary motion is determined in the defendant's, is not shown to be substantially the same as in the plaintiff's."

It appears, by an inspection and comparison of the two machines, that in both, the degree of rotary motion is determined by a notched plate, fixed to the end of the knife-shaft, with which a catch engages when the notches are brought opposite to the catch in their revolution. The knife-shaft is thus arrested and fixed while it descends, and the knife cuts. The catch is disengaged, when this operation is completed, and the knife-shaft is left free to revolve, so far as to bring the other notch opposite to the catch, which engages with it, and the same operation is repeated. In the plaintiff's machine, the catch is placed above the plate, and at a right angle with it, and engages the notch, partly by its own weight, but assisted by a spring. In the defendant's, the catch is placed opposite the face of the plate, which has a flange upon it, in which are the notches; and the catch is a spring-catch, of well-known construction. In the plaintiff's machine the catch is disengaged from the notch by a slide, working on the face of the plate, put in motion upwards against the catch by de scending with the knife-shaft, and striking a stud fixed to the frame of the machine.

In the defendant's, the catch is disengaged by impinging on an inclined plane, or wedge, against which it is moved by descending with the knife-shaft. In other words, the diversities are, that the defendant uses a spring-catch, the plaintiff a catch and spring; the defendant disengages by working against a wedge, the plaintiff by working through a slide against a stud. Of these diversities, Mr. Eddy, supported by Mr. Blanchard, says: "These are not, strictly, a combination, like that described in the patent of the said Richards; but they are a common and well-known combination for the purpose, and are mere substitutions for such mechanism as is described by the said Richards." Six experts, including Mr. Thompson, who built the defendant's machine, testify that, in their opinion, the two machines are not the same in principle and mode of operation. But no witness says that the use of a spring-catch, in place of a catch and spring, or the use of a wedge, or inclined plane, to disengage a catch, in place of a slide and stud, were not, what Mr. Eddy and Mr. Blanchard pronounced them to be, well-known combinations for those purposes. In my judgment, this is decisive. I do not think the doctrine respecting the use of mechanical equivalents, is confined by the patent law to those elements which are strictly known as such in the science of mechanics. In the present advanced state of that science, there are different well-known devices, any one of which may be adopted to effect a given result, according to the judgment of the constructor. And the mere substitution of one of these for another, cannot be treated as an invention. It does not belong to the subject of invention, but of construction. One constructor may adopt a spring-catch, another a catch and spring; but whether he takes one or the other, is matter of judgment in construction, as long as both are designed to accomplish the same end, and both are in common use to accomplish it.

The substance of this invention does not consist in the identical devices used, but in a practicable and described mode of effecting certain operations; and when the patentee has described what those operations are, and one practicable mode of effecting them, he has enabled constructors to effect these operations, not only by the identical devices he employed, but by all other known substitutes. If this were not so, no patent for machinery, of the least complication, would be of any value. Now, the difficulty which attends the affidavits, on the part of the defendant, is, that the opinions given by them are not accompanied by any explanation of

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what the witnesses mean by principle, or mode of operation, or by any statement of what, in point of fact, they consider are the diversities between the two machines; or whether those consist in the substitution of one well-known mode of effecting a given movement, in place of another. And this is equally applicable to what they say respecting the means of revolving the shaft. They express an opinion that the means are different, and the practical result better. Mr. Eddy and Mr. Blanehard think the practical result not so good; and though they do not say the means are the same, they do say they are long and well-known means of revolving the shaft.

If I were to come to the conclusion that the defendant's mode of revolving the shaft was a real practical improvement, it would by no means follow that it would not be an infringement of the patent. Looking at the whole structure devised by the patentee, and covered by the first claim, the question would then be if its substance was not used by the defendant, though he had improved it, by adopting a continuous, in place of an intermittent, motion. Very nice and difficult questions have been made concerning what are often called combinations, but the elements of which are not capable of being distinctly defined and separated. If a combination, properly so called, consist of two or more distinct things, and the patent is for combining them into one whole, it is familiar law, that if all are not used, the patent is not infringed. But the first claim in this patent is not for such a combination. It is for an operative part of a machine, and in substance covers that operative part; just as a patent for an entire machine covers the whole machine. In some sense, it may be called a combination, for it consists of different parts united together, as an entire machine does. But it is not strictly and technically a combination, any more than an entire machine is. And it may be improved, and a patent taken for that improvement; and at the same time, the improvement cannot be used without the consent of the original patentee. And even where a strict combination is claimed, if one of the elements of that combination is complex enough to admit of an improvement, without destroying its identity, such improved combination would still be an infringement. This case presents an illustration. The patentee claims the means of moving the gauge plate, in combination with the knife-shaft, and the means of revolving, fixing, and depressing it. This is technically a claim for a combination, and would not be infringed by a machine which should omit the motion of the gauge plate. But if that is used, the other element of the combination may be capable of being improved, without destroying its identity; and if thus improved, the whole combination, in the sense of the patent law, would be used.

Whether the change made by the defendant, in this case, goes beyond the mere substitution of one known device for another, so as to amount to a patentable improvement, or whether, if it does, it is still only an improvement of the thing patented, and so an infringement, are questions which it may be proper to raise hereafter, in the progress of the cause; but in the present state of the evidence, I do not see such grounds of doubt

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upon these points as ought to prevent the court from protecting the right of the plaintiff, by requiring the defendant to keep an account and file a bond, with sufficient sureties, to pay such sums as may be finally decreed against him; and in default thereof, an injunction must issue. I make the order for an injunction conditional, because it is not suggested that the defendant has constructed, or is about to construct, any other machine than the one complained of; and if the plaintiff is made secure of receiving all the profits which may arise from the use of the machine until a final decree, he will be sufficiently protected in case it is decided that the defendant infringes on a right belonging exclusively to him. I have not thought it necessary particularly to examine the other claim in the specification.

¹ [Reported by Hon. B. R. Curtis, Circuit Justice.]