KING v. LOUISVILLE CEMENT CO.

Case No. 7,798.

{6 Fish. Pat. Cas. 336;[1] 4 O. G. 181.}

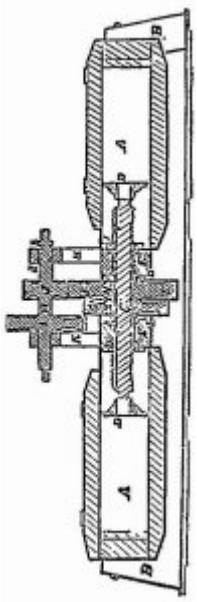
Circuit Court, D. Kentucky. March, 1873.

PATENTS—INFRINGEMENT—FORMAL ALTERATIONS.

1. The inventor of an ordinary machine is, by his letters patent, protected against all mere formal alterations, and against the substitution of mere mechanical equivalents, and the inventor of a mere combination should receive the same protection.
2. If no one can be held to infringe a patent for a combination, unless he uses all the parts of the combination and the same identical machinery as the patentee, then no patent for a combination will ever be infringed, on account of the case of making formal alterations.
3. No one infringes a patent for a combination who does not employ all the ingredients of the combination; but if he employs all the ingredients, or adopts mere formal alterations, or substitutes for one ingredient another, which was well known at the date of the patent, as a proper substitute for the one withdrawn, and which performs substantially the same function as the one withdrawn, he does infringe.
4. A screw rotated in a stationary nut, by means of a spur-wheel upon the screw-gearing with another, and which is therefore made to move longitudinally, is the equivalent of one, to which a like movement is imparted by a nut made to rotate upon it by means of a pulley placed upon the nut and belted to a drum.

In equity. Final hearing upon pleadings and proofs. Suit brought upon letters patent for an "improvement in baling-presses,"

granted to Wendell R. King, December 4, 1866, [antedated] August 28, 1866, No. 60,196. The invention consisted in the arrangement, in an apparatus, of two presses, operated alternately by a single screw, so that turning the screw in one direction, to compress the bale in one compartment, retracts the screw and releases the bale in the other.



The construction of the machine is more fully shown in the engraving, in which A, A, are the two compartments; O, the screw; and D, D, the followers. The screw is turned by the large cogwheel F, keyed upon the nut N on the screw. The wheel F is turned by the cog-wheel J, upon the shaft H, by a crank applied at h. When a more rapid motion of the screw is desired, the shaft H is nally in its bearings, thus throwing the wheel J out of gearing with the wheel F, and at the same time bringing the larger wheel I into gearing with the smaller wheel G, thus producing the motion required.

The description of the defendant's machine will be readily understood from the opinion of the court.

Lewis L. Coburn, for complainant.

Mr. James and Thomas Speed, for defendant.

BALLARD, District Judge. This is a suit in equity, by which the complainant seeks to enjoin the defendant from infringing certain letters patent, granted to him by the United States, for an improvement in baling-presses, and also to recover of the defendant all gains and profits realized by it from the unlawful making, using, and vending of said improvement.

The defendant, by its answer, does not question the validity of the plaintiff's patent, but denies the infringement, and it also denies that it has ever made any machine of the kind referred to in the bill, except the one which it is using, or that it has sold any whatever.

The complainant, in his specification, declares that his "invention consists in the arrangement, in one apparatus, of two presses, which are operated alternately, by a single screw, in such manner, that, turning the screw in one direction to compress the bale in one compartment of the press, retracts the follower, and releases the bale in the other compartment thereof, so that said bale may be readily removed as desired, thus, by said simultaneous and alternating action, avoiding all loss of time in operating the press.

"The machine is provided with two boxes, constructed in all respects alike, having lids opening upward, for placing in the boxes hair or other material to be pressed, and for removing the bale when pressed. When the press is being operated, the lids are fastened down by means of clamps, pins, or other suitable means. A screw is arranged between either end, extending into each of the boxes, and each end of the screw is provided with a follower, which moves against and away from the bale alternately. The screw is supported by passing through cross-pieces and through collars, through which it has a free, longitudinal, sliding motion, but is kept from turning by projections, which enter a slot, extending horizontally on the screw from one end to the other.

"There is a nut arranged on the screw, and on this, nut are keyed two cog-wheels, one small and the other large. The nut is turned by turning either of these cog-wheels, and when the nut is turned, the screw moves laterally without turning.

"In order to turn these cog-wheels, and operate the machine, there is a counter-shaft, supported in bearings on standards, which is supplied with two cog-wheels, one large and one small, so arranged that the small one engages with the large cog-wheel on the nut, and the large one with the small one, but they do not both engage at the same time. This shaft is made adjustable in its bearings, so that either of the cog-wheels arranged on it may be brought into gear. When the process of compression is commenced, the hair in the box being loose, but little power is required, and rapidity of motion is desired; but when the compressor has proceeded to a given point, increased power is desired and slowness of motion. To accomplish these results, the large wheel on the counter-shaft is first thrown into gear with the small wheel on the nut, when the turning of the wheel causes the screw to move in the direction of its axis rapidly, and the bale in one box to be released, and the loose hair in the other to be compressed with corresponding rapidity. After the compression is carried to a point when increased power is required, the counter-shaft is moved, so that its small wheel is thrown into gear with the larger wheel on the nut, and the process of compression is completed. The screw is made to move alternately in the direction of each box, by turning the counter-shaft in different directions. Being, as before stated, provided with a follower at each end, it will be readily seen how, while one bale is being compressed in one box, the compressed bale in the other box is being released, and how, by having a double-train gearing, speed can be exchanged for power and power for speed, as desired."

The complainant does not claim any of the separate parts of this machine. He claims

only the combination of the gearing with the screw and the boxes, when constructed and operating, substantially as described. The machine used by the defendant, like that of complainant, is provided with two boxes, a screw between and extending with each box, and a gearing, by which the slow and rapid motion is obtained. The same result, substantially, is accomplished by each machine; but in the defendant's machine, the screw, instead of sliding, first, in the direction of one box, and then in the direction of the other, revolves, and this is accomplished by having nuts, or female screws, firmly secured on the inner heads of both boxes, and a suitable gearing. The gearing consists in a small wheel, fastened firmly to a blank space on the screw, which is connected by means of a belt with a large drum or wheel, and a large wheel provided with spokes, like a pilotwheel, which is also firmly attached to the blank space on the screw. When the rapid motion is required at the beginning of the compression, the large wheel, or drum, is geared to the small wheel on the screw, and when increased power is required, the large wheel is used. Now, it occurs to me as obvious, that the large wheel, or drum, geared by means of the belt to the small wheel, in defendant's machine, is nothing but a mechanical equivalent for the large wheel geared to the small wheel, in complainant's machine, and that the large pilot-wheel in defendant's machine is a substantial, mechanical equivalent for the small wheel geared to the large wheel in complainant's machine. The drum-belt and small wheel of defendant's machine, operating in conjunction, perform precisely the same function as the large wheel-cogs and small wheel of complainant's machine, and, in fact, involve the same mechanical powers. So, also, the large pilotwheel of defendant's machine performs the same mechanical functions as the large wheel operated by the small wheel in complainant's machine. The mechanical power in each is the same. Increased power being desired, the mechanical device employed in each machine to accomplish this result, is a lever of increased length. It certainly can make no difference, that in the one case the power is applied directly to the end of the lever, and in the other that is is applied to the same point by means of appropriate gearing.

Nor can I perceive any difference between the mechanical function performed by the screw in one machine, and that performed by the screw in the other, or any substantial difference in their mode of operation. In each machine, the screw moves, in the line of its axis, alternately toward the boxes, and, though in the one machine it revolves, and in the other slides, I can not see that this makes any mechanical difference.

In the one it revolves, because the wheel to which the power is applied is firmly attached to the screw, and the screw works and moves in and through nuts, which are stationary; in the other, it is prevented from revolving by means of projections into a slot on the screw, but the screw works and moves because it is operated upon by a nut, which revolves. There is not a particle more of apparent or real difference between these mechanical devices, than may be seen by the operating of a screw with a single nut. If the

nut be held stationary, and the screw turned, the screw will move through the nut, and project beyond; on the other hand, if the screw be held stationary, and the nut turned, the nut will move, and cause the screw to project beyond it, precisely at it did before. The result is the same, and the mechanical operation is the same, in each case.

It is hardly necessary to add, that the mechanical powers employed in both of the machines have been long knowns and that it was hardly necessary to prove what the testimony, however, does establish, that it would occur to the merest tyro in mechanics that a substitution of the gearing employed in defendant's machine for the gearing employed in complainant's, would enable him to accomplish the same results which complainants do. If he would substitute strictly mechanical equivalents, it is obvious he would produce the same result, and by an operation really similar, though somewhat disguised.

The question then is, the complainant's patent being admitted to be valid, though it is for a combination, can the defendant avoid the charge of infringement, by substituting in lieu of some of the parts of the combination, well-known mechanical equivalents? I am quite clear that he can not, both on principle and authority. It is not to be disputed that the inventor of an ordinary machine is, by his letters patent, protected against all mere formal alterations and against the substitution of mere mechanical equivalents. Why should not the inventor of a new combination receive the same protection? If he can not, then will his patent not be worth the parchment on which it is written.

If no one can be held to infringe a patent for a combination, unless he use all the parts of the combination and the same identical machinery as that of the patentee, then will no patent for a combination ever be infringed; for certainly no one capable of operating a machine could be incapable of adopting some formal alteration in the machinery, or of substituting mechanical equivalents. No one infringes a patent for a combination who does not employ all the ingredients of the combination; but if he employs all the ingredients, or adopts mere formal alterations, or substitutes for one ingredient another which was well known at the date of the patent as a proper substitute for the one withdrawn, and which performs substantially the same function as the one withdrawn, he does infringe.

In the case of Gould v. Rees, reported 15 Wall. [82 U. S. 187], the supreme court say: "Bona fide inventors of a combination are as

much entitled to equivalents as the inventors of other patentable improvements; by which is meant that a patentee in such a case may substitute another ingredient for any one of the ingredients of his invention, if the ingredient substituted performs the same function as the one omitted, and was well known at the date of his patent as a proper substitute for the one omitted in the patented combination. And it is clear that an alteration in a patented combination, which merely substitutes another old ingredient for one of the ingredients in the patented combination, is an infringement of the patent, if the substitute performs the same function, and was well known at the date of the patent as a proper substitute for the ingredient." This authority, it seems to me, is entirely conclusive of this case, and it is hardly worth while to refer to other decisions, but the opinion of the same court, in the case of Seymour v. Osborne, 11 Wall. [78 U. S.] 555, and of Judge Sawyer, of the circuit court of the United States for the district of California, in the case of Carter v. Baker [Case No. 2,472], may be consulted.

I have not examined minutely the testimony of the experts produced by the respective parties in this case, because I do not ordinarily attach much importance to the opinions of witnesses so produced. I find them generally advocates of the party producing them. I have rarely ever derived any assistance from an expert who was not summoned and examined on the suggestion of the court itself; but in this case I have not referred to their testimony, chiefly because the nature of the complainant's invention and the operation of both his and the defendant's machines are so easily understood that assistance has not been needed.

Being of the opinion that the machine used by defendant is a clear infringement of complainant's patent, I shall direct a perpetual injunction, and give a decree for costs; but as complainant has offered no proof touching the damages, and they must be small, I shall direct no inquiry concerning them.

[1] [Reported by Samuel S. Fisher, Esq., and here reprinted by permission.]