

Opinion of the Court.

veyed to himself, to Spalding's children, or to any other person, without exceeding the powers conferred upon him by the trust deed, or affording to Spalding's creditors any just ground of complaint.

Decree affirmed.

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YALE LOCK MANUFACTURING COMPANY v. SARGENT.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE
SOUTHERN DISTRICT OF NEW YORK.

Argued March 15, 16, 1886.—Decided March 29, 1886.

The feature of varying eccentricity in the rollers is an essential part of the invention protected by letters patent No. 98,622 granted to James Sargent, January 4, 1870, for an improvement in permutation locks.

The case is stated in the opinion of the court.

Mr. Frederic H. Betts for appellant.

Mr. James Sargent in person and *Mr. Edward Wetmore* for appellee. *Mr. George Ticknor Curtis* was with them on the brief.

MR. JUSTICE MATTHEWS delivered the opinion of the court.

The bill in this case was filed by the appellee for an injunction to restrain the defendant below, the appellant, from an alleged infringement of letters patent No. 98,622, dated January 4, 1870, granted to James Sargent for an improvement in permutation locks, and for an account, &c. On final hearing on bill, answer, replication, and proofs, there was a final decree for the complainant for an injunction and for \$400.75 damages and costs. The defendant has appealed.

The question involved is the fact of infringement, and that in its turn depends upon the proper construction of the complainant's patent.

Opinion of the Court.

The specifications and claim of the patent, with the accompanying drawings, are as follows:

"Figure 1 is an elevation of the lock, with the back plate removed to show the interior.

"Figure 2, a vertical cross-section of the same.

"Figure 3, a diagram, showing the cam and the disconcerting eccentrics in perspective.

"Like letters of reference indicate corresponding parts in all the figures.

"Nature of the Invention.

"This lock is an improvement upon that of Linus Yale, in which an eccentric roller is combined with the cam for disconcerting the action upon tumblers.

"The invention consists in combining with the cam an arrangement of two or more eccentric rollers, of varying eccentricity, turning upon the same bearing, so that in revolving one or both may turn and alternate in action, thereby greatly increasing the difficulty of mapping out or locating the position of either.

"General Description.

"In the drawings—

"A represents the case of the lock;

"B, the cylinder for holding the tumblers or wheels;

"C, the spindle;

"D, the cam;

"E, the dog which falls to release the bolt; and

"G, the bolt.

"These are the ordinary parts employed in combination locks, and may be arranged in any desired manner; hence, they need no special description here.

"A single eccentric roller, H, pivoted, at *a*, to a suitable arm or bearing, and resting upon the cam D, has been before employed, as already stated.

"Its object is to disconcert the action inside the lock, so that an expert lock-pick or burglar cannot tell the position of the tumblers when operating upon the lock.

"It has been found by experiment, however, that such a de-

Opinion of the Court.

vice is not proof against the skill of an expert lock-pick, for, by the use of a delicate instrument attached to the spindle outside, and by careful manipulation, the shape and position of this roller can be actually mapped out or ascertained and the lock opened.

“To obviate this difficulty as far as possible, I combine with this roller one or more rollers H', pivoted to the same arm or bearing, and resting upon the periphery of the cam in the same manner; but all these rollers are made of varying eccentricity, and of different shape, and, therefore, when the cam is turned, the several rollers strike at different positions, and when one touches the other may be removed from contact, thus alternating in action. They may also turn in different directions.

“By this means, owing to the different contact of the several rollers, the difficulty of mapping out and locating the same is very greatly increased.

“In transferring the action from one roller to the next, the loss of contact with the first disarranges the position, and thus renders it indefinite.

“In this manner, and for this reason, the addition of another roller to the one already in use does not produce an accumulation of the same effect in action, but produces a different action altogether, by breaking the continuity of rotation and movement and contact.

“I disclaim the employment of a single eccentric; but what I claim as my invention, and desire to secure by letters-patent, is—

“The arrangement of two or more rollers, H, H', of varying eccentricity, when combined with the cam, in the manner and for the purpose specified.”

Mr. Henry B. Renwick, an expert called by the complainant, in explanation of the patent, says:

“I have examined the patent, and believe that the words ‘varying eccentricity,’ as applied to the rollers, mean that the rollers shall have their axes at different points in their diameters. If the two rollers be each $\frac{3}{4}$ of an inch in diameter, and one have its axis $\frac{3}{1000}$ of an inch from the nearest point in its periphery, and the other have its axis $\frac{4}{1000}$ of an inch from the

Opinion of the Court.

Fig. 1.

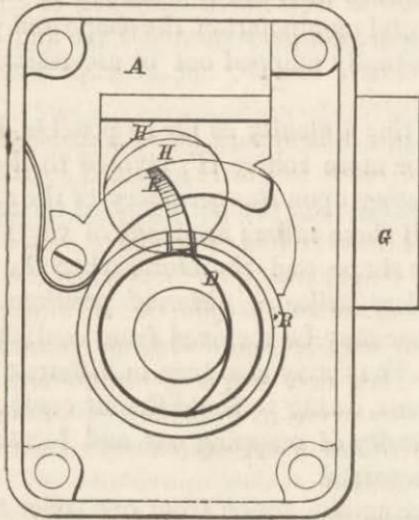


Fig. 2.

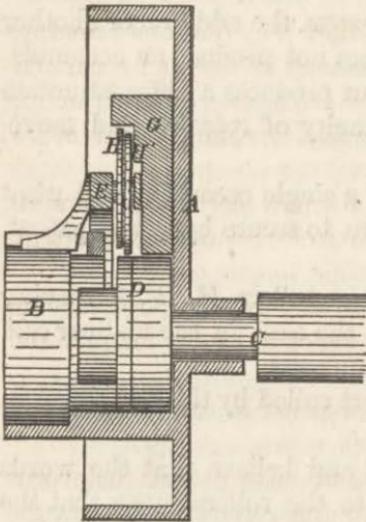
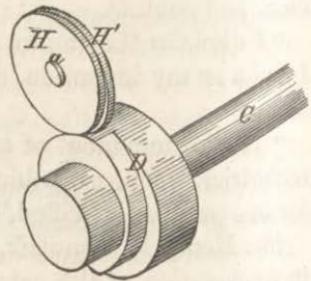


Fig. 3.



nearest point of its periphery, then they will be of varying eccentricity. This variation of distance of the axis from the nearest point of the periphery need be no greater than the

Opinion of the Court.

smallest distance that can be measured by the sensitive micrometers used in lock-picking, for the reason that the whole aim of the patented contrivance is to avoid picking by means of a micrometer."

The same witness was also examined upon the question of infringement, upon a comparison with the patent, of a lock made by the defendant, marked as an Exhibit Cole No. 1. He said:

"I have examined the lock Cole No. 1. It has two disconcerting rollers in combination with a cam upon which they ride. These rollers being for the purpose of preventing a lock-picker from ascertaining the position of the rotary tumblers by means of a micrometer, in this respect it is substantially identical with the contrivance described in the patent. Whether these rollers in the exhibit are of varying eccentricity or not I cannot positively determine, although they appear to be so by examination of them without instruments. A variation of eccentricity between the two rollers, which could be measured by a micrometer only, would be sufficient to secure the object which these rollers are designed to effect, and they may have such eccentricity, and yet it may be impossible to determine it by the eye alone."

On cross-examination he admitted that he could not tell with certainty whether the rollers were or were not of varying eccentricity. No other witness on the part of the complainant is able to prove the fact of a variation of eccentricity between the rollers used by the defendant, while, on the other hand, the testimony on the part of the defendant does not permit us to doubt that the rollers used in its locks are identical in their eccentricity and shape.

If, therefore, a variation of eccentricity in the rollers is a material feature of the invention, or is made material by the description and claim of the patent, no infringement has been proved.

It does not meet and answer the difficulty to say, as has been suggested in argument, that although the rollers in the defendant's locks may be of the same eccentricity and shape as respects each other, yet that, when in revolution, they vary in

Opinion of the Court.

eccentricity in reference to the cam which operates them, so that in action their eccentricity varies, and the same result is produced; because the description in the patent and the claim require that the variation of eccentricity should be between the rollers themselves, and not a variation in action in reference to the cam, and unless the same result is produced by the same means, there is no infringement of the invention. Besides, the fact is not as claimed. It is impossible mechanically for the rollers, being identical in eccentricity and shape with each other, to have the same relation at all times to the cam as though they varied in eccentricity. For, as is pointed out in the evidence on the part of the defendant, when the rollers are the same in eccentricity and shape with each other, there must be intervals of time at which "the two rollers having been rotated to a point at which their peripheries exactly coincided, both would revolve together for a short period, until some slight impediment or change in the periphery of the cam would cause one to bear more directly than the other upon the periphery of the cam, when this one would revolve with the cam, the other remaining stationary, and so on." And this feature in the action of two rollers, identical in eccentricity, it is said, introduces an additional irregularity into the operation of the mechanism, which increases its disconcerting power and adds to the difficulty of calculating the movement which enables the expert to pick the lock. So that the mode of operation is different, accordingly, as the rollers are of the same or varying eccentricities.

Were it otherwise, however, it would still be necessary to regard the feature of a variation of eccentricity as essential to the invention, because made so by the description and claim of the patent, although an equally good or even the same result might be obtained without it. The defendant does not use the same combination, and employs no device as an equivalent and substitute for the omitted element. It is not, therefore, liable as an infringer. *Water Meter Co. v. Desper*, 101 U. S. 332; *Gage v. Herring*, 107 U. S. 640.

The decree of the Circuit Court is accordingly
Reversed, and the cause is remanded, with directions to dis-
miss the bill.