

the type-wheels by being moved upward when it is desired to print by an independent electro-magnet. Thus, in the Calahan instrument, two type-wheels, printing on the same strip of paper, and three electro-magnets, are used, each one of which is operative from the central station by the appropriate device, which sends pulsations of electricity through the wires which connect the central station with the receiving instrument or instruments."

The third claim is for the combination of six elements: the type-wheel upon which are figures; the type-wheel upon which are letters; the electro-magnet operating the letter-wheel; the electro-magnet operating the number-wheel; the electro-magnet operating the impression-roller, so that impressions may be taken from either wheel; and the impression-roller.

The testimony for the plaintiff is to the effect that instruments made under the Wiley patent, No. 227,868, contain the invention specified in this claim.

One of the two experts who were introduced by the defendant said nothing in regard to the Calahan patent or its infringement. The other did not deny infringement, but thought that the Theiler (French) and the Johnson (English) patent, which was also for the Theiler invention, and which invention antedated Calahan's, contained the elements of his third claim: but the witness also testified that the Theiler patent does "not contain two independently moving type-wheels, each advanced by a magnet, independent of the magnet advancing the other type-wheel." The Theiler patent has but one electro-magnet, which moves and stops both type-wheels simultaneously, and neither wheel can be moved independently of the other.

The counsel for the defendant argued earnestly that there was no infringement, because, he insisted, the function of the magnets, *f* and *i*, in the Calahan patent, is entirely positive, *i. e.*, to act directly upon and move a type-wheel without extraneous aid; while the function of the defendant's magnets is entirely negative, *i. e.*, to prevent and regulate continuous extraneous motion imparted to the type-wheel by clock-work; and that these magnets were not, at the date of the Calahan patent, known to be proper substitutes for his magnets, and are not, therefore, equivalents therefor; and furthermore, that the Wiley machine is an improvement upon the Theiler machine, but in a different direction from the Calahan invention.

It is obvious that these various suggestions involve questions of fact, and that the defendant has no testimony, other than that appearing upon the face of the various patents and file-wrappers, upon which to support the theory of his counsel. These questions the patents alone will not settle. A court cannot deem itself called upon to examine elaborate theories upon abstruse scientific subjects, when the theories depend upon questions of fact, in regard to which there is an absence of testimony. In this case, it is to be noticed that the defendant's two experts have virtually declined to adopt his theory.

The conclusion is that infringement of the Calahan patent has not been disproved, and that the novelty of the third claim has not been successfully attacked.

The nature of the Van Hoesenbergh invention is stated in his specification as follows:

"Printing telegraphs have before been made with two type-wheels in line with each other, but revolved independently, so that one can be operative while the other remains quiescent. In machines of this character it is usual to stop one type-wheel when at the *nonius* or dash point, while the other is made use of; but sometimes a letter will be missed and the type-wheel will not properly print when again set going.

"My invention is made to set the type-wheels in their correct positions and consists in connecting latches or catches that are so positioned and operated that the type-wheel that is moved by the step-by-step motion keeps turning the type-wheel that would otherwise be quiescent until it is set, or arrives at the *nonius* or dash point. By this construction it becomes impossible for either type-wheel to remain out of unison while the other is being operated, because a movement given to either one brings the other to its proper place and there leaves it."

The single claim of the patent is:

"The method herein specified of causing one type-wheel to set the adjacent type-wheel by moving it around to the designated point, and there leaving the same, substantially as set forth."

As the mechanism of neither the Van Hoesenbergh nor the Wiley inventions can be understood by quotations from the patents, without an inspection of the drawings, and as the respective devices are described quite clearly and with accuracy in the testimony of the respective experts, I shall make use of their descriptions and omit the language of the specifications.

Mr. Brevoort says:

"Van Hoesenbergh accomplishes this result [that of bringing the wheel that is not in use into unison, by the operation of the wheel that is being used to obtain impressions from] by having upon each wheel a prawl and arms, so arranged that the wheel which was not in unison will be moved around by the wheel which is being operated, and which is in unison, by the arm of one wheel interlocking with the arm of the adjacent wheel; and these arms will remain interlocked, and the two wheels will move together until the wheel which was out of unison has been moved into the correct position, when, by one of two stationary arms, the two wheels will cease to interlock with one another, and the wheel which was misplaced will be left in the proper and known position to be started into operation, where it will remain, never mind how long the adjacent wheel may be operated."

Mr. Hicks describes the mechanism of the Wiley device as follows:

It contains—

"Two printing wheels, side by side, and arranged to print independently, to be moved independently, to stand normally at the dash point when not in motion, but the type-wheels are so independent that neither is affected by the other's motion while either of them is in motion. * * * The two type-wheels * * * are mounted on two shafts in line with each other, as in the Van Hoesenbergh patent, but with a bearing between them which would prevent

any mechanism of one from driving the other. * * * Each shaft is supplied with gears and a train of wheels, so that it is revolved by a weight or spring, after the manner of clock-work. Each shaft also is provided with an escapement wheel, *b*, into which an escapement engages, and the escapement is attached to the armature of a magnet, so that when the armature is attracted by the magnet one tooth of the escapement is let go, and when the attraction ceases another tooth is let go, thus moving the type-wheel by the clock-work whenever the magnet permits such motion. At each motion of the escapement a letter is presented to the paper for printing, excepting when the dash-point is above the paper. * * * Upon each shaft is a small circular disk attached to and moving with the shaft, and in the circumference of said disk is an insulating plug, extending a short distance on the circumference of the disk. The remaining portion of the disk is made of conducting material suitable for carrying a current of electricity, and the shaft is of a similar material. Now, by the operation of the escapement by means of the magnet, and a current of electricity thrown through its wire, the type-wheel is carried around to the dash point and stands there in its normal position. This is true of both wheels. If, however, by any accident the type-wheel should stand in an incorrect position when the opposite wheel begins to move, a current of electricity is caused to still continue to flow through a portion of the wire to the magnet which operates the incorrect wheel, and so said wheel continues to move towards its correct position until it arrives at that position, when the current ceases to flow and the magnet stops moving and the wheel stands still. The means for shifting the current of electricity, or preventing it from passing to the magnet continuously, is the insulated plug which I have referred to on the disk of the wheel, which, coming opposite the point of contact between the wire which carries a current normally through the disk thereby stops the flow of electricity."

The plaintiff insists—*First*, that the Van Hoesenbergh patent is for a process, and that, therefore, the causing one type-wheel, while it was being operated by a step-by-step movement, to set the adjacent type-wheel by moving it around by a step-by-step movement to the designated point, and there leaving the same, by whatever mechanism the process is used, is an infringement; and, *secondly*, that if the patent is not for a process, the defendant infringes by substituting for the mechanical means of Van Hoesenbergh the same mode of operation between the type-wheels by means of electricity.

I think that the question whether the patent is or is not for a process is immaterial, in view of the question whether the defendant does cause one type-wheel, by its step-by-step movement, to move the incorrect type-wheel around step by step to the designated or unison point and there leave it. The theory of the plaintiff is that the motion of the unison-wheel causes a current to flow through the magnet of the non-unison-wheel, and that the latter wheel is by the current advanced and continued in motion, and so the step-by-step movement of the unison-wheel is transmitted to the non-unison-wheel, until the latter "has reached the unison or dash point, when it will be arrested by a mechanism disconnecting the motion of its armature from the motion of the armature of the unison-wheel."

The theory of the defendant is that the motion of the correct wheel has nothing to do with setting the incorrect wheel at the dash-

point, "and its shaft has nothing to do in producing said result, except to furnish part of an electric circuit;" and further, that "each wheel has its own appliances for stopping the current to its magnet without aid from the other wheel, or its shaft, or its disk, excepting a means of electrical communication."

The correctness of the first part of this proposition is criticised by the plaintiff, and it is true, and is admitted by the defendant to be true, that the unison-wheel must move one step before it makes a complete electrical circuit with the non-unison-wheel and starts it. The circuit is not completed when the unison-wheel is at rest at the unison-point. The starting of the non-unison-wheel in consequence of the completion of the circuit is a different thing from setting the wheel at its dash-point, because it is not the motion of the unison-wheel which keeps up a continuous motion in the non-unison-wheel. The effect of one movement of the unison-wheel is to make a circuit, and by the power of the electrical current the other wheel is started; and so it may, in a certain sense, be proper to say that the movement of the unison-wheel is transmitted to the other wheel, but the motion of the unison-wheel does not keep the other wheel in motion. It is kept in motion because its magnet is continuously energized, and if the unison-wheel is stopped by the hand the electrical current is not affected, but continues, and the other wheel is carried to its unison-point.

In the Wiley machine the electrical current which operates, or is to operate, the unison-wheel is divided, and as soon as an electrical connection is formed by one movement of the unison-wheel and both magnets are energized, both type wheels are moved one step, and are continuously simultaneously moved, until the insulated point in the disk of the non-unison-wheel comes under the spring, when the magnet which moves that wheel is out of circuit, and that wheel stops and the motion of the other wheel continues. The electrical circuit which is formed with the shafts of the non-unison-wheel by the aid of one motion of the unison-wheel and of its shaft, is broken by means of the disconnecting apparatus, which depends upon the non-unison-wheel.

In my opinion, this mode of operation or method differs materially from one which consists in causing the type-wheel that is being moved to keep turning the other type-wheel to a designated point, and there leaving the same, although by a skillful use of words the two modes may be said to be the same. There is no infringement of the Van Hoevenbergh patent.

Let there be a decree for an injunction against the infringement of the third claim of the Calahan patent, and for an accounting, and dismissing the bill so far forth as the Van Hoevenbergh patent is concerned.

BRADLEY & HUBBARD MANUF'G CO. v. THE CHARLES PARKER CO.

(Circuit Court, D. Connecticut. July 17, 1883.)

1. PATENTS FOR INVENTIONS—INJUNCTION PENDENTE LITE—INFRINGEMENT.

An injunction *pendente lite*, to restrain a defendant from the infringement of a patent will not be granted when the validity of such patent has never been judicially determined and is in doubt.

2. SAME.

The questions in regard to the validity of the plaintiff's patent, and which prevent a preliminary injunction, stated.

Motion for Preliminary Injunction.

Chas. E. Mitchell and *O. H. Platt*, for plaintiff.

Chas. R. Ingersoll, for defendant.

SHIPMAN, J. This is a motion for a preliminary injunction to restrain the defendant from the infringement, *pendente lite*, of reissued letters patent, dated April 20, 1877, to the plaintiff, as assignee of John A. Evarts, for an improvement in extension lamp fixtures. The original patent was dated October 31, 1876. The invention related to an improvement in the class of lamp fixtures which is so constructed that the lamp and shade, when suspended, can be drawn down together and will rest at different elevations. In the original specification the invention was said to consist "in a weighted ring, which forms substantially a crown for the shade when the two are together suspended by one end of chains or cords over pulleys from the support above, combined with a shade-holder attached to the second end of the said chains or cords, and the lamp attached to the said shade-holder." The claim in the original patent was as follows:

"The combination of the weight-ring, B, the shade-ring, A, to which the lamp and shade are attached; the said shade-ring and weight-ring adjustably connected by chains or cords from a support above the said weight-ring, constructed to rest upon or crown the shade, all substantially as described."

In the reissue the invention is said to consist in "combining in an extension lamp fixture a shade-ring provided with a device for removably securing the shade to the ring, with the lamp attached to said shade-ring, and a weight of ring form to serve as a counter-balance; the said ring-shaped weight and shade-ring connected by chains or cords over a suitable support above, so that the lamp and shade may be drawn down, the weight-ring rising from the shade-ring."

The first claim of the reissue is as follows:

"The combination, in an extension lamp fixture, of the shade-ring, a device for removably securing the shade to the ring, the lamp attached to said shade-ring, the ring-shaped weight and shade-ring, connected by chains or cords over a support above, substantially as described."

In the second claim the shade was added to the combination of the first claim. In view of the history of the original patent in the patent-office, and of the original specification, the claims of the reissue should be so construed as to compel the weight-ring to rest upon or