award a preliminary injunction, if there is infringement, and postpone to the final hearing the determination of the questions relating to the validity of the patent, unless there is new evidence of such clear and persuasive character as to leave no fair doubt that the former decision was erroneous in point of fact, and would have been different if the new matter had been before the court. Electric Mfg. Co. v. Edison Electric Light Co., 10 C. C. A. 106, 61 Fed. 834.

The defendant here, for the purpose of obviating the consequences of this rule, submits and relies upon the Gard patents, Nos. 116,-296 and 123,010, as clear anticipations of the complainant's claims. But, whatever consideration and effect may be given to those patents upon final hearing, I think it cannot be held that they constitute such clear and positive proof of anticipation as to meet the requirement of the present occasion. I think a preliminary injunction should issue as prayed.

OVERWEIGHT COUNTERBALANCE ELEVATOR CO. v. IMPROVED OR-DER OF RED MEN'S HALL ASS'N OF SAN FRANCISCO.

(Circuit Court of Appeals, Ninth Circuit. February 13, 1899.)

No. 470.

1. PATENTS-PLEADING AND EVIDENCE-ANTICIPATIONS.

There is no error in admitting in evidence a patent of which notice has not been given, under Rev. St. § 4920, where it is introduced, not as an anticipation, but merely to show the prior state of the art, as bearing solely upon the question of infringement.

2. Same—Construction of Claims—Combinations.

When a specific element is not claimed as a device by itself, but all the claims are for a combination, this is, in effect, an admission that such element was old, and was not invented by the patentee.

3. Same—Infringement of Combination Claims.

If the invention claimed be but an improvement on a known machine, by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original machine by the use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable evasions of the first.

4. Same—Expert Evidence—Jury Trial. Where, in a jury trial, the question is as to whether an element in defendant's machine is the mechanical equivalent of one of the elements in the patented machine, the mere fact that there is testimony by experts that it is such an equivalent does not necessarily require the submission of the case to the jury; for the court is not bound to accept the opinion of experts, but may draw its own conclusions from an inspection of the respective machines or models, and if, in its opinion, the evidence is insufficient to support a verdict for the plaintiff, it may instruct the jury to find for defendant.

5. Same—Elevators.

The Hinkle patent, No. 257,943, for an improvement in freight and passenger elevators, construed, and held not infringed.

In Error to the Circuit Court of the United States for the Northern District of California.

For opinion of circuit court, see 86 Fed. 338.

W. H. H. Hart, S. C. Denson, and H. M. Van Arman, for plaintiff in error.

M. A. Wheaton and I. M. Kalloch, for defendant in error.

Before GILBERT and ROSS, Circuit Judges, and HAWLEY, District Judge.

HAWLEY, District Judge. This is an action at law to recover damages for the alleged infringement of letters patent No. 257,943, issued May 16, 1882, to Philip Hinkle, of San Francisco, Cal., for "an improvement in freight and passenger elevators." The invention claimed by Hinkle is stated in the specifications of the patent, as follows:

"My invention has reference to an arrangement for re-enforcing the lifting power of any given freight or passenger elevator without increasing the working power of the engine or motor that drives it; and it consists in the application of an overbalance counterweight for overbalancing the weight of the cage, and in the interposition between said counterweight and the cage of a self-acting brake, which prevents the superior weight of the counterbalance from being transmitted to the cage and engine power when the engine and cage are standing at rest. The self-acting brake which I use is a worm wheel and worm, which also serves as a gearing for transmitting the power of the engine or motor to the cage and counterweight, all as hereinafter more fully described."

The principle of this double-acting machine is illustrated in the specifications as follows:

"Suppose, for instance, that the cage weighs two hundred pounds and the counterweight four hundred pounds, and suppose that the worm can bear with safety a load of two hundred pounds; I can then raise four hundred pounds in the cage, besides the weight of the cage itself, and the engine will have only two hundred pounds to lift when the cage is raised, and the same amount when the cage is lowered, and the worm gears will at no time be subjected to a strain of more than two hundred pounds, whereas, with a simple balance weight, such as has heretofore been used, no more than the weight of the cage could be used as a counterbalance without having it react to lift the cage as soon as the application of power to the driving shaft ceased. In this latter case I would be able to raise a weight of only two hundred pounds on the cage. It is therefore evident that I am able, by using my overbalance counterweight, to raise twice the amount of weight on a certain size machine as heretofore, or, in other words, it enables me to do the same amount of work with an engine of half the capacity as has been heretofore required. In case it is desired to raise a load of more than ordinary weight, additional weight can be applied to the overbalance to any desired extent, within the limits of strength of the rope and mechanism."

The claims of the patent are:

"(1) In an elevator, the combination, with the hoisting drum, B, of the cage, A, and rope, C, thereof, attached to one side of the drum, B, and the overbalance weight, G, and rope, E, thereof, attached to the opposite side of the drum, B, substantially as set forth. (2) The combination, with the drum, B, and ropes, C and E, attached to the opposite sides thereof, and suspending the cage and overbalance weight, respectively, of the power shaft, J, provided with the worm, as described, and the worm wheel, I, mounted on the same shaft with B, as set forth."

The defendant in error uses what is known as the "Frazer Elevator."

The assignments of error present two questions for the consideration of this court:

1. It is claimed that the court erred in admitting in evidence, against plaintiff's objection, the letters patent No. 185,276, issued December 12, 1876, to W. D. Andrews, for an improvement in hoisting apparatus, which, it is asserted, was claimed by the defendant to be in anticipation of plaintiff's patent, on the ground that no notice had been given to plaintiff that such patent would be offered in evidence, as required by section 4920 of the Revised Statutes. It is true that counsel for the defendant insisted that the Andrews patent was a "full anticipation of the plaintiff's patent." But it was not admitted in evidence for the purpose of proving anticipation. The facts are that upon the cross-examination of Mr. Boone, a witness on behalf of plaintiff, certain questions were asked by defendant's counsel relative to the Andrews patent, which simply tended to show the state of the art, viz. that in the Andrews patent there was a counterpoise for the purpose of balancing the car and its load,-in other words, that there was in the Andrews patent the overbalance weight, which constitutes but one of the elements of the claims in plaintiff's patent. But, in any event, it is clear that no possible injury could have resulted to the plaintiff, even if the Andrews patent had been admitted in evidence, for the reason that the court did not base its instruction to the jury on the ground that plaintiff's patent had been anticipated. The validity of plaintiff's patent was not disputed. The only question considered by the court was whether, upon the facts introduced in evidence, any infringement of plaintiff's patent was shown. When plaintiff closed its case the defendant moved the court to instruct the jury to find a verdict for the defendant "upon the ground that the plaintiff has not proved any infringement," and upon the further ground that plaintiff had not shown any new invention covered by the claims of its patent. The last ground of this motion was expressly overruled by the court, and the motion, upon the first ground, was granted. From the facts shown by the record, it is manifest that the first assignment of error is wholly insufficient to justify a reversal of the case.

2. Did the court err in instructing the jury to find a verdict for the defendant upon the ground that the plaintiff failed to prove any

infringement of its patent?

It was claimed by the plaintiff in the court below that there was something new produced in plaintiff's patent, on account of the overbalance counterweight. It was there, as here, argued that the only difference between the Frazer elevator, used by the defendant, and the elevator shown in plaintiff's patent, was that instead of the single drum, worm wheel, and worm shown in plaintiff's patent for transmitting the power and motion from the motor to the cage and counterbalance ropes, the defendant's machine has substituted a different form of a transmitting device. The testimony was mainly directed to this issue, and as to whether the devices or elements used by the defendant's machine were, or not, the mechanical equivalents of those described in the plaintiff's patent. The experts introduced by the plaintiff testified generally that the device in the Frazer elevator, which, it is claimed, was substituted

for the single drum, worm wheel, and worm in plaintiff's patent, was, in effect, the mechanical equivalent of those devices, and that it performed the same duties in substantially the same way. Upon this testimony the plaintiff argues that the only question in the case was one of fact,—whether or not the substituted element of the combination of the Frazer elevator was a mechanical equivalent of the elements shown in plaintiff's patent for performing the same duty; that, the testimony of the experts being to the effect that it was, it became the duty of the court to submit that question of fact to the jury; and that the court therefore erred in instructing the jury to find a verdict for the defendant. To sustain this proposition, counsel cite Tucker v. Spalding, 13 Wall. 455; Keyes v. Grant, 118 U. S. 36, 6 Sup. Ct. 974; Humiston v. Wood, 124 U. S. 12, 8 Sup. Ct. 347; Royer v. Belting Co., 135 U. S. 319, 10 Sup. Ct. 833; Coupe v. Royer, 155 U. S. 565, 15 Sup. Ct. 199. It was admitted by the defendant at the trial that there is an overweight counterbalance in the Frazer elevator, and that its office and function are exactly the same as is shown in plaintiff's patent. would necessarily follow that, if the plaintiff's patent is susceptible of being so construed as being for that device alone, then, of course, it would follow that an infringement was clearly proved, and the judgment should be reversed. But an examination of plaintiff's patent discloses, upon its face, the fact, beyond any possible controversy, that it does not cover the use of an overbalance counterweight as an independent device. Both of its claims are for a combination of elements. The overbalance counterweight is claimed as one mechanical element in a combination with other elements specified in the claims. It certainly cannot consistently be claimed that Hinkle invented the overbalance counterweight. He was introduced as a witness, and upon his cross-examination said:

"A counterbalance to counterpoise against the weight of a cage has been used for years and years,—probably before I was born. All hydraulic elevators used them. I used them, and other elevator builders used them. They were used simply to counterbalance the weight of the cage."

This result ordinarily follows whether there is any testimony upon the point or not. When a specific element is not claimed as a device by itself, it is, in effect, admitted that the particular element is old, and was not invented by the patentee. In 3 Rob. Pat. § 923, it is said:

"A patent claiming a combination only does not protect the elements of which it is composed. If these are old, they are already the property of the public. If they are new inventions of the patentee, his failure to claim them is a concession, so far as this patent is concerned, that they are old."

In the Corn-Planter Patent, 23 Wall. 181, 224, the court said:

"Where a patentee, after describing a machine, claims as his invention a certain combination of elements, or a certain device or part of the machine, this is an implied declaration—as conclusive, so far as that patent is concerned, as if it were expressed—that the specific combination or thing claimed is the only part which the patentee regards as new. True, he or some other person may have a distinct patent for the portions not covered by this; but that will

speak for itself. So far as the patent in question is concerned, the remaining parts are old or common and public."

See, also, Rowell v. Lindsay, 113 U. S. 97, 102, 5 Sup. Ct. 507, and authorities there cited.

Every element of the combination is presumed to be material, and it is the combination of the elements that is new. As was said in Water-Meter Co. v. Desper, 101 U. S. 332, 337:

"Our law requires the patentee to specify particularly what he claims to be new, and, if he claims a combination of certain elements or parts, we cannot declare that any one of these elements is immaterial. The patentee makes them all material by the restricted form of his claim. We can only decide whether any part omitted by an alleged infringer is supplied by some other device or instrumentality which is its equivalent."

Plaintiff's patent being for a combination, it necessarily follows that there cannot be any infringement, unless the Frazer elevator contains all of the elements of the combination in plaintiff's patent, or their mechanical equivalents. Norton v. Jensen, 33 C. C. A. 141, 90 Fed. 415, 429, and authorities there eited.

In De Loriea v. Whitney, 11 C. C. A. 355, 364, 63 Fed. 611, 620, the court of appeals said:

"The rule, prima, facie, is that, while the use of equivalents for an element in a combination is not lawful, yet a combination which does not include all the elements does not infringe. There may be exceptions where the nature of the invention is of such a primary or broad character that it is plain some of the elements named are unessential; in other words, where the invention is so broad that the range of equivalents will be correspondingly broad, under the liberal construction which the courts give to such inventions. Miller v. Manufacturing Co., 151 U. S. 207, 14 Sup. Ct. 310. But there is no reasonable basis for maintaining, either as a matter of law or fact, that the case is outside of the rule applied to ordinary combinations in Water-Meter Co. v. Desper, 101 U. S. 332; Fay v. Cordesman, 109 U. S. 408, 420, 421, 3 Sup. Ct. 236; Knapp v. Morss, 150 U. S. 221, 228, 229, 14 Sup. Ct. 81; and Dunham v. Manufacturing Co., 154 U. S. 103, 14 Sup. Ct. 986."

There is a clear distinction drawn, in all of the authorities which discuss the question, between a pioneer invention and an invention merely of improvements by a combination of mechanical devices. A patentee who is the original inventor of a device or machine—a pioneer in the art—is entitled to a broad and liberal construction of his claims; but an inventor who only claims to be an improver is only entitled to what he claims, and nothing more. In other words, the original inventor of a device or machine has the right to treat as infringers all who make or use devices or machines operating on the same principle, and performing the same functions by analogous means or equivalent combinations. "But if the invention claimed be itself but an improvement on a known machine, by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original machine by use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first." McCormick v. Talcott, 20 How. 402, 405; Norton v. Jensen, 33 C. C. A. 141, 90 Fed. 415, 422, 423, and authorities there cited.

Touching the question as to whether the Frazer elevator contained all the elements, or the equivalents thereof, of plaintiff's patent, and the effect of the testimony of the experts in regard thereto, the circuit court, among other things, said:

"Testimony has been introduced here that in defendant's machine it is what they call a 'differential result,' * * * but there has not been a witness who has testified in this case that has stated that the operation in the plaintiff's machine was a differential result. There are no motions there that produce that result: no two forces at work that produce that result. It is simply a drum that is set in motion. It winds in one direction and unwinds in the other; again winds up in the other direction, and unwinds as it was in the first place. The Frazer machine has been introduced in evidence. It is here. It is in evidence in this case, and we have been able to see the operations of that machine and the plaintiff's machine. I take it that it does not make any difference what declarations are made by witnesses; if the two things are different, the court should so hold. My opinion is that in this case there is nothing for the jury to decide, and, if it did decide that that was produced by the same means of hoisting in the plaintiff's machine as it was by the defendant's machine, that I ought to set aside a verdict of that kind. It is patent to me they are different. They are not the same means. It is no use to talk about the other parts of the machine, because, as I say, they are admitted to be old. It is only the combination that is new, and, if there is no equivalent used in the plaintiff's machine for every element of that combination, there is no infringement."

Reading the plaintiff's patent in the light of the conditions and usages prevailing, at the time of its inception and issuance, in the art to which the invention relates, and upon examination of the models of the respective machines exhibited to the court, we are of opinion that the conclusions arrived at by the court are correct. The motive power of the two machines is radically different, in their construction and mode of operation. The elements mentioned in the claims of plaintiff's patent are not all found in the Frazer elevator. The plaintiff's elevator operates with a single motor and with a worm gear. The Frazer elevator has no worm gear, and is so constructed that it could not be operated either with a worm gear or with a single motor. The plaintiff's elevator has a drum, around which a rope is wound and unwound. The Frazer elevator has no such drum. In the plaintiff's elevator the drum which transmits the power from the driving motor turns in one direction to raise the cage, and must reverse and turn in the opposite direction to lower the cage. In the Frazer elevator there is no drum or pulley, transmitting the power from the motors, that turns in one direction to raise the cage, and then reverses and turns in another direction to lower the cage. In the light of these and other different mechanisms, which need not be stated, we are of opinion that, notwithstanding the general opinions and conclusions expressed by the expert witnesses, the plaintiff's patent is not infringed by the use of the Frazer elevator.

The court certainly has the unquestioned right to draw its own conclusions from an exhibition and inspection of the respective machines, or models thereof, as well as from the opinions of expert witnesses. It is not bound to accept such testimony as conclusive. The Conqueror, 166 U. S. 111, 131, 17 Sup. Ct. 510. It considers the facts upon which the opinions of the witnesses are based, and determines

from all the evidence in the case whether the conclusions given by the witnesses are sound and substantial. The value of expert testimony generally depends upon the facts stated as a reason for their opinions and conclusions. Green v. Terwilliger, 56 Fed. 384, 394; 1 Tayl. Ev. § 58. More weight is given to the testimony of a witness based upon facts within his own knowledge and experience than to the testimony of a witness which is "largely the assertion of a theory." Béné v. Jeantet, 129 U. S. 683, 688, 9 Sup. Ct. 428. In 3 Rob. Pat. § 1012, the author, in discussing this subject, says:

"That there are experts in other departments of affairs upon whose opinion the court is forced to rely as the foundation of its own judgments, because incapable of forming an opinion for itself, and that such experts consequently fill the places of judges, and should be beyond the influence and control of parties, must be conceded. But such is not the case with patent experts, whose opinion is received in evidence only in connection with the reasons on which it is based, and is to be accepted or rejected by the jury according to their own view of its fallacy or truth. * * * Their statements of fact are simply to be weighed, like those of all other witnesses, by their ability and disposition to disclose the truth; and their opinions are to be followed when, in the judgment of the jury, they are supported by the facts from which they are deduced."

See Walk. Pat. (2d Ed.) § 498.

The law is now well settled that the trial court not only has the power, but it is its duty, where the evidence is insufficient to support a verdict in favor of the plaintiff, to instruct the jury to find a verdict in favor of the defendant. This rule applies to patent as well as other cases, and is as applicable to the question of infringement as to any other material or controlling question involved in the case. In 3 Rob. Pat. § 1014, it is said:

"If an inspection of the invention practiced by the defendant, in connection with the one described and claimed in the patent, satisfies the court that there has been no infringement, * * * there is no occasion for extraneous evidence, and the court should direct the jury to return a verdict for the defendant without further inquiry. * * * Neither a court nor a jury are permitted to follow the guidance of any expert, in defiance of the results of practical operation and experiment, nor against conclusions derived by necessary inferences from established facts." Walk. Pat. (2d Ed.) § 536; Fond du Lac Co. v. May, 137 U. S. 395, 403, 11 Sup. Ct. 98; Railway Co. v. Rowley, 155 U. S. 621, 630, 15 Sup. Ct. 224; Black Diamond Coal-Min. Co. v. Excelsior Coal Co., 156 U. S. 611, 618, 15 Sup. Ct. 482; De Loriea v. Whitney, 11 C. C. A. 355, 63 Fed. 611, 617; Cramer v. Fry, 68 Fed. 201, 212; Chapman v. Lumber Co., 32 C. C. A. 402, 89 Fed. 903, 905, and autherities there cited.

This principle is recognized in Poyer v. Belting Co., 135 U. S. 319. 10 Sup. Ct. 833, and is not denied in any of the other cases cited and relied upon by plaintiff. The judgment of the circuit court is affirmed, with costs.

LAPPIN BRAKE-SHOE CO. v. CORNING BRAKE-SHOE CO.

(Circuit Court, N. D. New York. April 12, 1899.)

1. PATENTS-INVENTION-BRAKE SHOES.

There is no patentable invention in chill-hardening the extremities of : brake shoe through the entire mass of the metal, instead of through only a fractional part thereof.

2. SAME—CONSTRUCTION OF CLAIMS.

A claim which is simply for a brake shoe having the metal at its extremities chill-hardened through its entire mass, instead of only a fractional part thereof, cannot, for the purpose of sustaining it, have imported into it, by construction, the particular method by which the patentee produces the chill-hardening.

3. Same—Brake Shoes.

The Charles F. Wohlfarth patent, No. 543,072, for an improvement in brake shoes, is void for want of invention.

This was a suit in equity by the Lappin Brake-Shoe Company against the Corning Brake-Shoe Company for alleged infringement of patent No. 543,072, issued on July 23, 1895, to Charles F. Wohlfarth, for an improvement in brake shoes. The cause was heard on demurrer to the bill.

Joseph D. Gallagher, for complainant. Edmund Wetmore, for defendant.

COXE, J. The bill makes profert of the patent, which is for an improvement in brake shoes. The claim is for "a brake shoe having the metal at its extremities chill-hardened through the entire mass, in contradistinction to being hardened only through a fractional portion thereof: whereby at all times during the life of the shoe, the effects of abrasion are resisted by hard metal." This is a claim for the device—qua a brake shoe—without the slightest reference to the method of producing it. The specification states that the identical article covered by the claim has been produced before except that the chill, at the ends, has extended part way instead of the entire distance from surface to back. The sole claim to invention must rest, therefore, upon the fact that the patentee made the chilled zone deeper than his predecessors. At the argument it was conceded that a shoe having chilled metal at its extremities extending from surface to back, no matter how the chill was produced, would anticipate the claim if found in the prior art, and that such a shoe if made now would infringe. In other words, the claim is for a brake shoe with a thicker sole at the ends than had been used before. It is broad enough to cover a brake shoe chilled at its ends in any manner and by any process, whether the chill blocks are applied at the bearing surface, at the back, at the end, at the sides, or in all these ways combined. It is not pretended that it involved invention to use the old chill block at the back of the shoe which was formerly applied to its surface or to use it at the end, or at the sides of the shoe. All this would be the most simple mechanical work. And yet a shoe chilled at its ends by any of these methods would be as much within the claim as if the blocks shown

in the drawings were used. Such a shoe would have the metal at its ends chill-hardened through the entire mass—the claim requires nothing more. That the claim is invalid, unless the method of producing the chill, as shown and described, is imported into it is hardly disputed. It is insisted, however, that this may be done and should be done. The claim would then read as follows:

"A brake shoe having the metal at its extremities chill-hardened through the entire mass by means of the chill blocks G and H adapted to inclose the shoe at the ends on all sides except the top," etc.

It is argued that such a chill box produces chill lines running both horizontally and vertically, thus preventing chill cracks and intensifying the chill. Assuming that this contention is susceptible of proof the difficulty is that the claim is not for a method but for a shoe. So far as the proposition now under discussion is concerned, it is as if the specification were absolutely silent on the subject of chill blocks. The claim permits the use of any chill blocks. Where the language of a claim is clear and simple there is no room for construction. The court is convinced that if the patentee has made an invention he has failed to claim it. No patentable novelty can be found in the claim as stated in the patent. The patentee might have claimed a process, he might have claimed a novel chill block; but he has done neither. The court is, therefore, prohibited from giving him a patent limited to an article produced by means of an alleged ingenious device which is not even mentioned in the claim. Were the rule otherwise it would be a dangerous menace to public rights which might be destroyed, not by the patent emanating from the patent office, but by a different patent subsequently granted by the court. Even were there more doubt as to the correctness of this conclusion the court would still be of the opinion that it is for the interest of both parties that the question should be definitely settled before they are required to incur the large expense of preparing for a final hearing. The demurrer is allowed.

BADISCHE ANILIN & SODA FABRIK v. KALLE et al.

(Circuit Court, S. D. New York. May 8, 1899.)

1. PATENTS-PRIOR USE IN FOREIGN COUNTRY.

Under Rev. St. § 4923, mere prior use in a foreign country does not defeat a patent where the patentee is ignorant thereof, and believes himself to be the first inventor.

2. Same—Anticipation—Prior Publications.

A description which is insufficient to support a patent cannot be relied upon as an anticipation. Unless the prior publication describes the invention in such full, clear, and intelligible terms as to enable persons skilled in the art to comprehend it, and reproduce the process or article claimed, without assistance from the patent, such publication is insufficient as an anticipation.

3. SAME-EXTRINSIC EVIDENCE.

Prior patents and publications alleged to anticipate must be taken in the meaning disclosed upon their face, and extrinsic evidence is not admissible to reconstruct them, as by showing that a word having a sensible meaning in the context was erroneously used for another word.