

ants' rights, or that they have individually derived any profit or advantage from the patent sued on. No reason is shown why a decree should be rendered against them as individuals. As to them, therefore, the bill is dismissed at complainant's cost. *Howard v. Plow Works*, 35 Fed. 743; *Boston Woven Hose Co. v. Star Rubber Co.*, 40 Fed. 167; *Consolidated Fastener Co. v. Columbia Fastener Co.*, 79 Fed. 795.

The bill is sustained as to claims 2 and 4, and dismissed as to claim 6, and a decree will be entered accordingly, and for an injunction and an accounting of the profits and damages in respect to claims 2 and 4, the injunction not to be operative until 60 days after the entry of the decree, on account of the public inconvenience that might result in summarily enjoining the defendant Home Telephone Company in the use of its switch boards.

CONSOLIDATED CAR-HEATING CO. v. WEST END ST. RY. CO.

WEST END ST. RY. CO. v. CONSOLIDATED CAR-HEATING CO.

(Circuit Court of Appeals, First Circuit. February 18, 1898.)

Nos. 234 and 235.

1. PATENTS—INFRINGEMENT SUITS—PARTIES.

A bill against several defendants contained allegations involving charges of conspiracy and joint infringement. The proofs were insufficient to support these allegations, and by leave of court complainant dismissed as to all but one corporation, which was charged in the bill with using devices covered by the patent. *Held*, that the court properly granted leave to the complainant to dismiss the bill as against one of the defendants, while refusing to dismiss the bill generally for misjoinder of parties.

2. SAME—CHARACTER OF CLAIMS.

One who has made a broad invention may state its general principles and requisite features in one claim, and, in another, the general principles and requisite features, supplemented by a more particular description of the details involved in the contemplated structure.

3. SAME—ELECTRICAL CAR HEATERS.

The *McElroy* patent, No. 500,288, for an electrical heater for street-railway cars, construed, and *held* valid, and infringed as to both its claims.

Appeal from the Circuit Court of the United States for the District of Massachusetts.

This was a suit in equity by the Consolidated Car-Heating Company against the American Electric Heating Corporation, the West End Street-Railway Company, and certain individuals, for alleged infringement of letters patent No. 500,288, issued June 27, 1893, to the complainant, as assignee of James F. *McElroy*. The suit was voluntarily discontinued as to the individual defendants, leaving merely the two corporations, which, by some of the allegations, were charged as joint infringers. The circuit court held that the first claim of the patent was void, but that the second claim was valid, and had been infringed. It found, however, that the proofs were insufficient to show a joint infringement by the two corporations, and therefore directed that, if the complainant desired to dismiss the bill against one of the respondents, it might do so on payment of costs; that, unless it did so, the bill would be dismissed, with costs; but that, if it dismissed as to one of them, a decree should be entered adjudging claim 1 void, and for an accounting and injunc-

tion as to claim 2. 82 Fed. 993. The plaintiff accordingly dismissed as to the American Electric Heating Corporation, leaving the West End Street-Railway Company as sole defendant, and a decree was entered against the latter, from which it has appealed. The complainant also appealed from that part of the decree dismissing the bill as to claim 1.

Frederick P. Fish and William K. Richardson, for Consolidated Car-Heating Co.

James H. Lange and Odin B. Roberts, for West End. St. Ry. Co.

Before COLT, Circuit Judge, and WEBB and ALDRICH, District Judges.

ALDRICH, District Judge. The assignment of error based upon the refusal of the circuit court to dismiss for misjoinder of defendants is not well founded. The proceeding was originally against several defendants, and, among others, the West End Street-Railway Company, the only remaining party against whom the complainant now asks relief. Some of the allegations below involved a charge of conspiracy and joint infringement, but by leave of court and by amendment the bill was dismissed as against all except the West End Street-Railway. Orders relating to the conduct of a trial and to amendments adjusting the parties to a controversy are generally treated as orders made in the exercise of discretion, and not subject to exception and review. In an equity case, however, where the appeal brings up questions of law and of fact, the court of review may doubtless examine to see whether the case, as presented, is, either upon the law, the facts, or the pleadings, an inequitable case; and if, for any reason, it so appears, relief may and should be withheld. But in this case the West End Railway, one of the original defendants, was charged with using car heaters covered by the patented device, and this allegation, in what remains of the original proceeding, fairly enough, we think, raises the questions of patentability and infringement. The patent in controversy relates to mechanism, and a device for converting the energy of an electric current into heat energy for the purpose of heating street cars, railway trains, and houses by electricity. There are two claims in the patent, and in the circuit court the second claim was held to involve patentable invention, and the defendant appealed, while the first claim was held invalid upon the ground that all of its substantial features were covered by the second claim, and the complainant appealed. The case comes to us on cross appeals, and therefore presents the questions involved in both claims.

The defendant's counsel have argued with great ability and earnestness against the conclusion of the circuit court that the second claim involves patentable novelty. We are, however, not only not satisfied that the court went too far in sustaining the patent, but are satisfied that it stopped short of giving the patent the scope to which it is fairly entitled through what is expressed by the inventor in his first claim. We will consider first the general question of invention. While the heater in question is described generally as for the purpose of warming an apartment, it is obvious, from read-

ing the whole specification, that the real problem which the inventor intended to solve was how to heat street cars. As is well understood, when electrical power was applied to street railways, and the lines increased so as to involve long runs, and include places at a considerable distance, the question how to suitably heat the cars at once became an important one. Stoves took up considerable space in the car, were uncomfortable and dangerous, rendering too much heat in the locality of the stove, and not enough in other parts of the car. So it became a question how the motive power could be utilized to evenly distribute heat through the car. It is not necessary that we should reiterate a description of the inventive device and the mechanism which connected the described structure with the electric current, thereby enlisting its energy and converting it into heat for the purposes designed. The ingenious means by which this result was accomplished are sufficiently set out in the opinion of the circuit court (82 Fed. 993), together with a description of the means by which the device has done its work so successfully and satisfactorily as to supplant all other means, and become an almost universal heating device for street cars moved by electricity. As shown by the record and the evidence, persons skilled in the art had previously endeavored to accomplish the desired result, but without practical avail, and until McElroy combined the known electrical energy with his happy mechanism, and described a device for putting the heat energy involved in electricity into practical operation for this purpose, the public had continued to ride in the cold. All agree that his device is practical, useful, and a decided advance upon any theretofore described or known. It does the work. In practical use the heating coils are placed under the car seats in different parts of the car, arranged with a radiating surface capable of heating the car in extreme cold weather, and with practical stops or cut-offs for reducing the radiating surface, and thus properly adjusting the heat to milder degrees of cold. The spiral coils are safely insulated, electrical contact avoided, and the current safely conducted through means of a mechanism so adjusting the parts as to make the whole self-protecting against the jar and vibration resulting from rapidly moving cars. Looking at the general use, and the substantial results accomplished through the mechanical arrangement and the device described, with the practical view of giving the inventor, rather than with the view, through refining processes of reasoning, of depriving him of, what fairly belongs to him, it is difficult to see how the patentability of the device in suit can be seriously challenged. Aside from technical and refining analysis as to what some feature of the prior art may cover or might do, and without reference to the question as to what class of invention the patent in question belongs, it is difficult to view the McElroy device, which provides for connecting with the motive power—the electric current—in a manner which develops and utilizes its heat energy, and in a harmless and practical form diffuses its influence throughout the car, as other than a useful and substantial contribution to the practical art.

Great stress is laid upon the English patent to Rose as embodying anticipatory features, but the Rose device did not do the thing that this device does. It did not undertake to do it, and, so far as appears, no one ever thought of its being applied to such a situation, and doing the work in the manner in which the device in question does it. Quite likely the Rose patent had some of the ideas involved in the patent in question,—as, for instance, the idea of radiating heat by means of coils of wire,—but it did not describe, or even suggest, the distribution of heat, either in detail or in substance, in the manner and by the means employed in the complainant's device. As was said by the circuit court, under the rules applying to foreign patents it cannot be viewed as anticipating the McElroy invention.

Now as to the claims. In practice the coils of wire are wound or laid around an insulating substance, usually porcelain, in paths or grooves which form a ridge of nonconducting material, serving to keep the coils apart, and thus prevent short-circuiting. While the first claim expresses the idea that the layers of spirals shall be separated from each other, it does not describe the mechanical detail for accomplishing such result. The second claim is more explicit in respect to this feature or detail of the contemplated structure, and describes the separating or insulating substance as a nonconducting material placed between the adjacent layers. It is reasonable to conclude, we think, from the inventor's statements in his claims, that he had thought out the situation, and contemplated that other means than the nonconducting material between the layers of spiral coils might be employed by the skilled mechanic, and that he would therefore make his first claim broader than the limit which he puts upon his second claim by expressly describing a nonconducting material as the means for performing the function of keeping the coils separated. He quite likely anticipated that, if he expressly limited himself to nonconducting material as a means for keeping the wires separated, the value of his patent might at least be threatened by the construction and use of heaters made in accordance with his scheme, except in respect to the means employed to prevent short circuits. In other words, some one might construct a heater like his, except the coils might be kept separate in other ways than expressly described by him in his second claim. What the inventor intended to cover by his second claim, and what he might rightfully cover, was a heater constructed upon the general principles and with the general features of his device, with the coils of wire separated by nonconducting material, such as a porcelain ridge between the coils, formed by the grooves into which the coils were laid as they were wound about an insulating substance; while by his first claim he intended to cover a structure with the same general features, with such other means separating the coils as might occur to the ordinary skilled mechanic as a useful means for performing the particular function of keeping the wires separate. In other words, by the second claim he describes nonconducting material as his means for separating the coils and preventing contact, while

by the first claim he describes the layers of spirals as something to be separated, without specifically setting out the means of separation. It is possible, and perhaps probable, that the second claim might be construed as covering not only nonconducting material placed between the spiral layers, but such other means as might occur to the skilled mechanic as useful for that purpose, but it does not, it seems to us, necessarily follow that the inventor is bound to rely upon such scope as would probably result from construction. He may, for the purpose of describing the extent of his claims, not only state the general principles and requisite features of the invention in one claim, but the general principles and requisite features in another claim, supplementing this with a more particular description of the details involved in the contemplated structure. We do not consider the claims identical, and, therefore, one or the other superfluous, but view the first claim as broader than the second in the respect which we have stated, and not inconsistent therewith. Holding these views, both claims are sustained as valid, and with such result we are not called upon to consider the question raised by the sixth assignment of error.

The remaining question is that of infringement, and as to this we agree with the conclusion of the circuit court. The decree of the circuit court will be modified so as to stand in favor of the complainant below on the first claim of the patent in suit as well as on the second claim, and the case is remanded to that court for further proceedings accordingly. Costs in this court are decreed in favor of the Consolidated Car-Heating Company.

WHEATON v. KENDALL.

(Circuit Court, N. D. California. January 31, 1898.)

No. 11,781.

1. PATENTS—INTERFERENCE PROCEEDINGS—EQUITY SUIT.

In an equity suit brought under Rev. St. § 4915, by a defeated contestant in interference proceedings, to determine his right to a patent, the court has power to decide the question of priority without any exceptions or limitations; and, when the decision of the patent office is based rather on questions of law than any distinct finding of priority, the court will make an independent examination of the testimony, and reach its own conclusions.

2. SAME—INVENTION.

The conception of an invention consists in the complete performance of the mental part of the inventive act,—the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice. If anything remains to be created or devised in order to enable the machine to perform its functions in the manner proposed, the conception is not complete, so as to show a true idea of the means.

3. SAME—REDUCTION TO PRACTICE.

One is not entitled to a patent until he has performed a complete inventive act, by conceiving a complete and finished idea of means, and then reducing it to practice in some art, machine, manufacture, composition of matter, or design.