

ventor of this device, but that the real credit of the invention, if any there be, belongs to Mr. Barrett.

Counsel for the appellant insisted that, if the testimony left in the mind of the court a reasonable doubt upon this point, his client was entitled to the benefit of it. A large number of cases, both in the supreme court and in the circuits, hold that doctrine, nor do we propose to dispute it. If it were an open question, we might consider whether the presumption arising from the granting of the letters patent could not be overthrown, as any other presumption at law is overthrown, by the preponderance of evidence. But accepting it as settled that any doubt is fatal to a claim antagonistic to the validity of letters patent themselves because of fraud, we can but say that in this case the principle cannot afford the appellant any assistance. The evidence is too convincing to permit the shadow of a doubt.

Having arrived at this conclusion, it is not necessary to discuss the question of novelty, which was raised and ably argued by both counsel before the court. The result is that the judgment of the court below is affirmed.

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EDISON ELECTRIC LIGHT CO. et al. v. DAVIS ELECTRICAL WORKS.

(Circuit Court, D. Massachusetts. December 13, 1893.)

No. 3,196.

PATENTS—INFRINGEMENT—RECONSTRUCTING ELECTRIC LAMPS.

The Edison incandescent electric lamp is an organic whole, which lasts only during the life of the carbon filament; and, if the bulb is thereafter broken open, the identity of the lamp as a structure is gone. Therefore it is an infringement of the patent to make a hole at the bottom of the bulb, insert a new filament having its ends inserted in platinum sleeves, close the hole by fusing a piece of glass over it, and then exhaust the air.

In Equity. Bill by the Edison Electric Light Company and others against the Davis Electrical Works for infringement of letters patent No. 223,898, granted January 27, 1880, to Thomas A. Edison for an electric lamp. Decree for complainants.

Frederick P. Fish and Wm. K. Richardson, for complainants.  
John L. S. Roberts, for defendant.

COLT, Circuit Judge. If the Edison lamp were so constructed that a new burner could be placed in it, like a new wick in an ordinary lamp, or if it were made of two parts designed to be taken apart for the purpose of replacing the old burner with a new one, as in the Sawyer-Man lamp, I should hold that a purchaser of the Edison lamp had a right to renew the carbon filament, on the ground that this was an ordinary repair, contemplated by the patentee when the lamp was sold, and that the defendant in so repairing such lamps did not infringe the Edison patent. But the difficulty which meets me in this case is that the Edison lamp was not designed to be so repaired, and is incapable of such renewal.

The Edison lamp is constructed as an organic whole, and you cannot break open the all-glass chamber and insert a new filament without a substantial reconstruction of the lamp. The lamp is only intended for use during the life of the filament. In prior incandescent lamps the life of the burner was brief, and it was necessary to so build the lamp that this part could be renewed. Edison, by making an almost perfect vacuum in the all-glass chamber, and thoroughly sealing all the parts, constructed a lamp in which the filament or burner lasts from 600 to 1,000 hours. To attain this result the lamp assumes a form of construction which renders it impossible to replace a new filament in the glass bulb without building essentially a new lamp. When you take an Edison lamp with its filament destroyed, and break open the all-glass chamber, you have only left the broken pieces—the remains—of the original lamp. Its identity as a structure is gone. The only parts remaining which are not impaired or destroyed are the metallic head and the leading-in wires. When you build anew from such materials, it is like breaking up an old machine and constructing a new one in which some of the old parts are used.

The defendants first break off the tip of the glass bulb of the lamp, and ream out a hole about one-half inch in diameter. The broken filament is then removed. The new filament, having its ends cemented into platinum sleeves, is then inserted into the glass chamber, the sleeves being pushed down over the two platinum leading-in wires, and compressed upon them. A tube of glass, made into the shape of a funnel, is heated and placed over the hole in the lamp chamber. This tube is fused into the open end of the bulb, which brings it into the condition of the ordinary lamp bulb just prior to exhaustion. The air is then exhausted and the bulb sealed. It is evident that this operation covers many of the constructive features of the ordinary lamp. When we consider what is done by defendants in connection with the second claim of the Edison patent, it is made clear, I think, that the defendants do more than merely repair. The claim is for "the combination of carbon filaments with a receiver made entirely of glass, and conductors passing through the glass, and from which receiver the air is exhausted, for the purposes set forth." It will be seen that this claim consists of four elements,—a carbon filament, a receiver made entirely of glass, conductors passing through the glass, and a receiver from which the air is exhausted. It is apparent that defendants, by substituting a new filament, making over the glass receiver, and exhausting the air from such receiver, produce a lamp in which all the elements but one (the leading-in wires) of the patented combination are used either in a new or reconstructed form. The lamp thus produced is substantially a new lamp, and its voltage may be higher or lower than the old one. From the very nature of the Edison invention, I do not see how the glass bulb can be opened, and a new filament inserted, without making essentially a new lamp.

As to the new lamps which the defendants are charged with making I find no sufficient proof that the defendants make or

threaten to make them since the decision of this court sustaining the Edison patent. Their business seems to have been confined strictly to their so-called "repairing."

Injunction granted.

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BALLARD v. McCLUSKEY.

(Circuit Court, S. D. New York. December 14, 1893.)

1. PATENTS—INVENTION.

Patentable invention is shown when the combination is new, and produces a machine which does more and better work than those which preceded it.

2. SAME—BOX MACHINES—EJECTORS.

Invention is shown in substituting, for the old rubber ejectors in the blank or pattern cutting roll of a box machine, sectional ejector plates which are actuated by springs, have a central support and rocking motion, and are more easily adjustable, more durable, and superior in operation to the old.

3. SAME—INFRINGEMENT.

A claim, in a box-machine patent, for "the scoring roll, S, and the pattern cutting roll, C, the former having a continuous series of scoring knives, and the latter a corresponding series of pattern knives arranged upon their peripheries," is infringed by a machine in which the scoring roll is but one-third the size of that of the patent, and has but one series of knives instead of three, but which is made to revolve three times as fast, thus equalizing the difference in dimensions.

4. SAME—EVIDENCE—WITNESS.

A court of equity should scrutinize with great care the statements of a patentee who, having taken the oath that he believed himself to be the first inventor, as required by Rev. St. § 4892, gives testimony inevitably tending to prove that such oath was false.

5. SAME—PARTICULAR PATENT.

In the Titus patent, No. 272,354, for improvements in machines for cutting box patterns, the first claim *held* to be too broad, and a disclaimer required; the other three claims *held* valid, and infringed by defendant.

In Equity. Bill by Charles W. Ballard against James J. McCluskey for infringement of a patent. Decree for complainant.

For prior report, see 52 Fed. 677.

Walter D. Edmonds, for complainant.

James P. Foster, for defendant.

COXE, District Judge. This is an equity suit for infringement, founded upon letters patent No. 272,354, granted to James M. Titus, February 13, 1883, for improvements in machines for cutting box patterns. The patent is now owned by the complainant. The invention relates to machines for cutting box patterns from continuous sheets of veneer which are first scored according to the desired pattern and are then passed under a cutting roll which cuts a series of patterns from the scored sheets and automatically removes them by means of ejectors. Although the scoring of the sheets and the cutting of the patterns may be effected in separate machines the inventor's method is to feed the scored sheets to the cutting roll directly they leave the scoring roll. In this way he saves time and labor and avoids the difficulty of causing the scored