

chines made the demand. They created the market. There is nothing but conjecture to show that the defendants would have resorted to the hand-made method. First, it was so expensive as to be practically prohibitory, and, second, it was impossible to make a marketable plaiting by hand,—one that could compete successfully with the machine-made plaitings.

But the matter should not be left to presumption. The burden was upon the complainant to establish the affirmative of both these propositions—First, that the profits were entirely due to the combination of the claims; and, second, that the cost price of hand-made plaitings was a fair measure of comparison. He has done neither.

Various illustrations will occur to any one familiar with patents where ingenious labor-saving machines have created an art which otherwise would not have existed. Take the paper-bag industry, for instance. Is it a fair assumption that a manufacturer who found himself precluded from using the patented machines, which turn out bags by the thousands, would attempt to supply the market with hand-made bags? A machine will sometimes make in a second an article which never was made before and which can be made by hand only after hours of painstaking toil by a skilled artisan. The machine will supply hundreds of millions of these articles annually to commerce at a price merely nominal. To make the same articles by hand, though physically and experimentally possible, is practically and commercially out of the question. The time, labor and money required would preclude such an attempt. An article costing a dollar cannot compete successfully with a better article costing a mill, and no rational being would attempt such a competition. And yet, if the doctrine of the report is pushed to its logical conclusion, the owners of patents for comparatively unimportant inventions will be able to levy an enormous tribute upon infringers, resulting in fabulous but unmerited wealth to the former and bankruptcy to the latter.

With the highest respect for the opinion of the learned master, the court is unable to agree with the conclusions reached by him.

The exceptions, so far as they relate to the questions discussed, must be sustained.

INTERIOR CONDUIT & INSULATION CO. v. EUREKA ELECTRIC CO.

(Circuit Court, S. D. New York. April 21, 1894.)

PATENTS—LIMITATION BY PRIOR STATE OF ART—ELECTRIC WIRING.

In the Johnson and Greenfield patent, No. 401,498, for improvements in wiring structures for electric lighting, claim 1, for the combination of a pipe of insulating material, a pair of wires insulated from each other and in close proximity within the pipe, each forming one side of an electric lighting circuit, and a safety catch interpolated in the circuit, and claim 3, for the combination of the same elements, having the wires twisted together, even if such combination involves invention, all the elements being old, in view of the prior use of similar devices and combinations, can be upheld only if limited to a complete system of pipes extending continuously through the building, as described and shown; and they are not infringed by structures which do not employ such a system.

This was a suit by the Interior Conduit and Insulation Company against the Eureka Electric Company for infringement of a patent.

R. N. Dyer and D. H. Driscoll, for complainant.
Francis Forbes and C. E. Mitchell, for defendant.

COXE, District Judge. This is an infringement action based upon letters patent No. 401,498, granted to Johnson and Greenfield, April 16, 1889, for improvements in wiring structures for electric lighting. The object of the patentees was to provide buildings with wires for electric lighting which can be readily removed and replaced by other wires. A second object was to furnish protection from fire. There are four sheets of drawings and a description which enters minutely into details, but the improvement in controversy may be stated briefly to consist in placing a pair of wires,—each wire forming one side of an electric lighting circuit,—into a pipe made of insulating material; a safety catch being interpolated in said circuit.

The first and third claims are the only ones involved. They are as follows:

"(1) In house wiring for electric light, the combination of a pipe of insulating material, a pair of wires insulated from each other and placed in close proximity to each other within said pipe, and each forming one side of an electric lighting circuit, and a safety catch interpolated in said circuit, substantially as set forth."

"(3) In house wiring for electric light, the combination of a pipe of insulating material, a pair of insulated wires twisted together within said pipe, each wire forming one side of an electric lighting circuit, and a safety catch interpolated in said circuit, substantially as set forth."

The defenses are lack of novelty and invention, noninfringement, defective title and the absence of an oath from the amended specification.

The combination of the claims is limited to the following elements in house wiring for electric lights: First. A pipe of insulating material. Second. A pair of wires insulated from each other, and placed in close proximity to each other within said pipe, and each forming one side of an electric lighting circuit. Third. A safety catch interpolated within said circuit. The third claim is like the first, only it is still further limited to a pair of wires twisted together. In the specification as originally filed, the patentees claimed the invention without reference to the material of which the pipes were constructed. Indeed, metal pipes were used by them prior to the application. They also assert in the specification as filed that, instead of one tube with two wires, two tubes containing one wire each may be used without departing from the spirit of the invention. The application was rejected upon several references, the examiner holding that the applicants had merely adopted the well-known underground system for use in buildings, and that it was not new to run electrical wires through pipes under the plaster of buildings. The applicants thereafter amended, the principal change being the limitation of the claims to pipes made of insulating material. The application was again rejected on the

Martin patent No. 286,940, which shows paper tubes for conveying electric wires, the examiner observing that "the mere fact that the pipes are of insulating material is not patentable." He also pointed out that safety catches were old. The specification was again amended, and thereafter the patent issued. The complainant's brief concedes:

"That each of the elements of the combination claimed in claims 1 and 3 of the patent in suit was individually old. The insulating tube was old, the twin conductor was old and the safety catches were old."

Again, the brief says:

"Thus, the patents in evidence show that the character of paper tube set forth in the complainant's patent was not in itself new, but could be produced by any one skilled in the art."

The question then is, did it involve invention to place the old twin wires in the old insulating tube and interpolate a safety catch in the circuit?

If there were nothing more of the prior art shown than is contained in the foregoing admissions, there might be difficulty in reaching a correct answer, but it further appears that the following devices and combinations were old:

First. Short lengths of insulating tubing were used in this art in the walls and partitions of buildings.

Second. Zinc and wooden tubing was used in the side walls of buildings with single wires. Twin wires had been run through the tubes of chandeliers, and through zinc tubes five or six feet long in the walls of buildings. Safety catches had been used in connection with a circuit formed by two wires drawn through the pipe of a chandelier.

Third. Complainant's brief sums up the distinguishing merits of the alleged invention as follows:

"Such, then, being the admitted facts, it is apparent that the invention of Johnson and Greenfield resides in the peculiar way of utilizing the general knowledge that electric wires in close proximity tend to a short circuit, which general knowledge was availed of before by separating the conductors so as to avoid this short circuiting. Now, the peculiar way in which Johnson and Greenfield availed themselves of this general knowledge is by combining the three known elements, which were never before combined, so as to bring about the short circuiting of the wires to quicken the action of the safety catch."

But it would seem that all this was clearly disclosed by Mr. Johnson himself in his patent No. 359,726, granted in March, 1887. The specification says:

"I have discovered, however, that by bringing the conductors close together, and so arranging and constructing them that any imperfection of the insulation will immediately establish an arc between the conductors themselves of such low resistance as to amount to a practical short circuit, the safety catches will be invariably fused and the circuit broken before damage can occur. * * * It will be seen that there can be no contact of the inner conductor with any external object except through the outer conductor. The breaking down of the insulation separating the conductors will with certainty produce an arc of such low resistance as to effect a short circuit between the conductors, instantly fusing the safety catch or safety catches protecting the particular conductors, and breaking the circuit, or the two conductors, being in such close proximity, will be soldered together by the fusion of the lead covering, which evidently will form a short circuit between them."

Fourth. In 1876, Edward A. Hill obtained a patent, No. 176,784, in which occurs the following statement:

"I propose to provide a series of tubes or pipes broken at each turning, and at intervals along their lengths, by open spaces, to afford access to the bundle of several wires which are run through said tubes. These tubes or pipes are laid throughout the building, preferably supported by the lathing before the plastering is applied."

Fifth. In 1883, John F. Martin obtained a patent, No. 275,399, the object of the invention being "to provide a noncombustible and fire-proof conductor for electric light and other wires to be conveyed through buildings." This is accomplished by providing tubes of paper with an insulating lining.

Sixth. In 1884, Henry Edmunds obtained a patent, No. 291,170, in which he describes the inconvenience of passing the conductors through long lengths of pipe, and obviates this alleged difficulty by placing two insulated wires in a metallic case.

Seventh. The patent granted in 1884, to Jonathan H. Vail, No. 308,713, shows two insulated wires twisted precisely as shown in the patent at bar, and inclosed in pipes of lead with safety catches interpolated in the circuits. In short, if for the lead pipe, which is a poor conductor, were substituted a pipe of insulating material, the Vail combination would be almost the exact counterpart of the combination of the claims.

Eighth. The record also shows that systems approximating the system of the patent were well known in underground wiring.

Enough has been said to demonstrate the proposition that this patent rests upon an exceedingly vague and shadowy foundation. What did these patentees do? Grant that they were the first to place the old twin wires into a tube made of insulating material, it certainly did not require invention to do this. One of the patentees, when asked whose idea it was to use this tubing, said: "We both recognized intuitively the necessity for such material if we were to evolve a perfected conduit system for electric wiring." In other words, the idea of using the old insulating pipe would come spontaneously to any skilled electrician. But, as before shown, they were not the first to use a nonconducting tube in this way.

I have examined the patent with care to discover what new idea it has contributed to the art, and am compelled to think that the art of electric lighting would have lost nothing tangible if the statements of the patent had never been made public. I cannot resist the conclusion that many of the marvelous attributes ascribed to the patent are afterthoughts, which find their origin largely in ardent and ingenious expert imagination. It may be doubted whether the patentees themselves were conscious, when they put the old wires in the old pipes, that they had made a discovery which cured all the defects of the past and was to lay a heavy tribute upon all electrical wiring in the future. What they did do seems most simple to the ordinary layman. Both were accomplished electricians. Mr. Greenfield had had large experience in wiring buildings. In 1883, he had wired the Mills building by drawing insulating wires through zinc tubes. Mr. Johnson had a cottage at Greenwich which he

wished to have wired. He consulted Mr. Greenfield on the subject, and the latter describes what occurred at the supreme moment when the invention had its birth:

"Mr. Johnson asked me if I couldn't wire that cottage in a way so that the wires could be got at and repaired, if necessary, without tearing up any of the building, and I told him, 'Yes;' I thought that I could put in a system of tubing which could be used for race ways, if properly constructed, making a continuous channel; and he said, 'Greenfield, go ahead and do it,' which I did."

Most assuredly he did it: What else could he do? He had done substantially the same thing before in the Mills building, and he utilized his knowledge to suit the changed condition precisely as any other skilled electrician would have done after he was told what was wanted. The attempt to magnify this apparently simple exploit into an invention of surpassing excellence can be accomplished only by the substitution of theories based upon the imagination for facts based upon the evidence.

If a construction broad enough to cover the defendant's structures is placed upon the claims, they must be held invalid. If limited to a complete system of pipes extending continuously through the building "from supply to consumption," as shown in Fig. 1 of the patent, the claims may be upheld. But the defendant does not employ such a system, and in no event is the third claim infringed for the reason that the defendant does not use a pair of wires twisted together.

It follows that the bill must be dismissed.

SHAW v. ANDREWS et al.

(Circuit Court, S. D. New York. July 10, 1894.)

1. CONTRACTS—CONTEMPORANEOUS CONSTRUCTION BY PARTIES.

Evidence of the opinion of the parties to a contract as to its meaning, not carried into effect by any act, does not show such a contemporaneous construction as should govern its interpretation.

2. PATENTS—ASSIGNMENT FOR SHARE IN PROFITS OF ASSIGNEE.

An agreement for assignment of a patent, including claims for infringement and royalties, provided for the collection of royalties and suing of infringers by the assignees, and that they should manage the patent as they might deem best for the interest of all parties; that the assignor should be paid one-fourth of the net proceeds of the business; and also fixed a basis for prices of royalties. *Held*, that the assignor was entitled to share in the profits of the assignees from their own use of the patent, as well as in the royalties therefor.

In Equity. This was a suit by Jehyleman Shaw against William D. Andrews and others for an accounting for a share of royalties and profits under an assignment of a patent.

Thomas M. Wyatt, for plaintiff.

William Man, for defendants.

WHEELER, District Judge. The defendants were the owners of the patent to Green for driven or tube wells. *Eames v. Andrews*, 122 U. S. 40, 7 Sup. Ct. 1073. The plaintiff was the owner of patent