

CELLULOID MANUF'G CO. *ET AL.* V. RUSSELL *ET AL.*

*Circuit Court, S. D. New York.*

February 4, 1889.

1. PATENTS FOR INVENTIONS—ANTICIPATION—CELLULOID—PRINTING FROM ENGRAVED PLATE.

Claim 2 of letters patent No. 348 222, granted August 31, 1886, to the Celluloid Manufacturing Company, is for the improvement in the art of printing with engraved plates on pyroxyline compounds, consisting in (1) inking the plate with an ink containing or consisting of a solvent of pyroxyline and a pigment, and (2) in subjecting the material to heat and pressure while in contact with the inked plate. The testimony of one of two witnesses by whom it was sought to prove anticipation was based on hearsay, and none of the products printed in his establishment, and showing the alleged anticipation, were produced. That of the other was contradicted in many important particulars by the inventors and another. The exhibits in support of alleged anticipations were all made after the patent. In previous attempts to print on celluloid the ink blurred, and was easily erased, while the printing by means of the patented process resembles the finest engraving on ivory *Held*, that the process is a novel and valuable invention; though the materials previously existed, they had not been used before in the combination claimed; and that the patent is valid.

2. SAME—SPECIFICATIONS—SUFFICIENCY.

The mere failure of the specification to disclose fully the nature of the ink, the evidence showing that various inks containing a solvent of pyroxyline cannot be successfully used, does not avoid the patent under Rev. St. § 4920, providing that defendant may plead that for the purpose of deceiving the public the specification was made to contain less than the whole truth. It must be shown in addition that the omission was with a fraudulent intent.

3. SAME.

It is unnecessary, also, in the specification, to caution against an ink with a solvent of such volatility as to make it useless.

In Equity.

Bill by the Celluloid Manufacturing Company and others against Benjamin Russell and others for the infringement of a patent.

*W. D. Shipman* and *J. E. Hindon Hyde*, for complainants.

*B. F. Thurston* and *H. M. Ruggles*, for defendants.

COXE, J. This is an equity action for the infringement of letters patent No. 348,222, granted to the Celluloid Manufacturing Company, as

the assignee of M. C. Lefferts and J. W. Hyatt, the inventors, August 31, 1886, for an improvement in the art of printing upon pyroxyline compounds. The invention consists in printing upon celluloid by means of engraved plates; the celluloid being subjected to the action of heat and pressure while in contact with the inked plate, which, preferably, should have a highly burnished surface. Any ink which contains a solvent of pyroxyline may be used, but one in which the coloring matter is in the form of a pigment, and which contains a binding agent, is recommended. The celluloid is subjected to heat, from 180 deg. to 230 deg. Fahrenheit, to soften its surface; and to pressure, to cause the material to flow into the engraved lines. Thus a clear and permanent impression is obtained, a result unknown prior to the invention. The second claim only is involved. It is in these words:

“(2) The improvement in the art of printing with engraved plates on surfaces of celluloid or other pyroxyline compounds, which consists in—*First*, inking the plate with an ink containing or consisting of a solvent of pyroxyline and a pigment; and, *second*, in subjecting the material to heat and pressure while in contact with the inked plate.”

The defenses are lack of novelty, non-infringement, and that the patent is invalid because it contains less than the whole truth relative to the invention.

Celluloid is a hard, non-fibrous, non-porous substance, and for a long time defied the efforts of the most experienced experts to print successfully upon it. The well-known methods of printing on paper and other similar material produced no satisfactory result when applied to celluloid. The ink would blur. It was not indelible. The impression was not permanent. It could be easily rubbed off. It was like attempting to print on glass, porcelain, or ivory. The efforts to reach a satisfactory result were long continued, and were only crowned with success after many experiments had been tried. To devise such a process required invention. A mechanic would have suggested the ordinary method of printing, but it required genius and the originating faculty to bring in the element of the synchronous use of heat, sufficient to soften the celluloid, and uniform pressure, in conjunction with an ink containing a solvent of pyroxyline. The inventors were not only mechanics, but experts, possessing an uncommon and peculiar knowledge of the properties of celluloid. One of them was, in addition, proficient in the art of printing, having had an experience of 10 years; and yet the idea which now seems obvious did not occur to them until after months of effort.

It was stated on the argument, and not denied, that there is not in the record a single specimen of printing upon celluloid made prior to the patent. A number of exhibits have been introduced to illustrate and explain the testimony of the witnesses as to what was known prior to 1884, but the fact is undisputed that they were all made after the patent was issued. This is an unusual, and a most significant fact. On the other hand, the exhibits introduced by the complainants as illustrating their process are, many of them, of

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great beauty and artistic merit. It is not pretended that anything at all approximating them in appearance

existed before. They resemble the finest engraving upon ivory. Many men were striving, to reach this result, but the process of the patent was the first one successfully employed. It is apparent now that the step was a simple one. But six years ago the obstacles seemed insurmountable, even to the most learned and skillful. A traveler who, surrounded by darkness and mist, has lost his way amid Alpine snows, may perish within a few steps from the friendly shelter which he seeks. The rising sun shows how easily he might have been saved if he had pressed on for a moment longer. So this record shows how near many prior searchers were to the patented process, but it also shows that they did not know it until the truth was revealed by the light thrown on the art by the inventors. The conviction is forced upon the mind that they have taken a step in advance; that they have given something valuable to the public; and therefore that they are entitled to liberal treatment in a court of equity. To all the able and ingenious arguments of the defendants may well be opposed this single fact—no one, prior to the invention, ever produced any printing upon celluloid which is worthy to be compared to the exhibits of the complainants.

The record fails to show anticipation by that high class of evidence required in such cases. The testimony of the witnesses Hart and Lee, standing alone, might be sufficient, but the force of their statements is greatly weakened and impaired by the evidence in rebuttal. The testimony of Lee, in its important particulars, is based upon hearsay, and although several thousand dials, which exhibited the alleged anticipation, were printed in his establishment, not one of them is produced in court. Hart is not corroborated, except in non-essentials, and he is expressly contradicted in many important particulars by both the patentees and by Lockwood, to all of whom he refers as having knowledge that he printed on celluloid from engraved plates. It is so easy to be mistaken in such matters, and there were at the time referred to by Hart so many similar operations which he might have confounded with the patented process, that, even though it cannot be positively demonstrated that he is in error, there is at least sufficient doubt to prevent his assertions from overcoming the presumption of novelty arising from the patent itself. Some of the reasons for this doubt are stated with distinctness by one of the patentees. He says:

“In every instance these dials [referred to by Hart] were printed from wood blocks, or their equivalent, such as electrotypes or stereotypes, with an ink containing a strong dryer. This ink could be softened and rubbed from off the face of the celluloid, leaving no trace behind it. They were evidently not printed by the use of heat, as the scratches and marks left in the sheet by the process of sheeting it were not removed, which would have been the case had it been pressed against any surface while in a softened condition due to heat. This shows me that if Hart had printed any such dials from engraved plates I would have probably seen them among the samples sent to us from time to time. This and the fact that he never spoke to me in regard to such printing, and that he sent Mr. Gleason to me for the purpose of learning how to transfer impressions of watch-dials from paper to

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celluloid, which was necessarily an expensive, and only a partially successful process; and that, when I sent him samples of watch-dials printed on celluloid from engraved plates by myself

he acknowledged that they were very beautiful, and the handsomest things that he had seen on celluloid, and that he thought they were valuable, and that his company would purchase them, provided the celluloid were a little whiter; and yet that, during all this time, and even after the patent issued, he advanced no claim to the invention, or intimated that he had ever printed himself from engraved plates,—is conclusive to my mind that he never did so print, or that, if he did, the results were unsatisfactory, and of no value.”

The patent being for a process, each ingredient and each step is necessary to make the operation a success. Omit one and failure ensues. Each separate step of the process may have been taken before. The ink described may have been known. All this is unimportant. It is enough that no one before had used the process. The materials may all have been ready at hand, but unless they were combined by others in the manner described by the inventors, there is no anticipation, and nothing which defeats the patent for lack of invention. Surely the prior art does not show beyond a reasonable doubt that the ink described by the defendants was ever used for printing upon celluloid from engraved plates by heat and pressure, or that any one knew that it could be so used.

Section 4920 provides that the defendant may plead that, for the purpose of deceiving the public, the specification filed by the patentee was made to contain less than the whole truth relative to his invention. It is seldom that a patent has been overthrown under this provision. It is not sufficient that the specification contains less than the whole truth, but the omission must have been made with intent to deceive the public. It now appears that the accusation under this defense is that the specification did not fully disclose the nature of the ink, the proof showing that various inks which contain a solvent of pyroxyline cannot be successfully used. The complainants were not advised of this particular charge by the allegations of the answer, which is general, and in the language of the statute, and it is insisted that the answer is defective in this particular. There is force in this objection, but it is unnecessary to consider it, for the reason that the proof fails to show that the omission referred to was made with a fraudulent intent. The burden is upon the defendants to prove the defense, and they have failed to do so. The specification is addressed to those having a knowledge of the art. To caution them against compounding an ink with a solvent of such high volatility as to make it useless in practice, would seem to be unnecessary. A formula intended for those skilled in pyrotechny, which states that any powder may be used, need hardly add the caution not to use dynamite. The common sense of the operator would teach him not to employ such high explosives. There is hardly a controversy upon the question of infringement. A construction of the patent which would enable the defendants to escape the charge would be illiberal, and one unwarranted by the proof. The complainants are entitled to the usual decree.