

combination of the Spring patent. It had the griping-chuck, the rest preceding the cutting tool, the cutting tool, and, instead of the guide-cam, its equivalent, a pattern,—all the parts arranged, combined, and operating in the same manner as in the Spring machine. It had, in addition, a fixed cutting tool preceding the rest, which served to reduce the material to the cylindrical form in which it is first received in the Spring lathe. But this extra tool formed no part and was wholly independent of the other combination. The machine still had all the elements of the Spring lathe in the same combination. The Murdock lathe was used for turning tapering wooden skewers or spindles for use in spinning yarn. It was not constructed so as to be capable of turning awls or machine needles from metal.

It has been decided by the supreme court that "the application of an old process or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated." *Pennsylvania R. Co. v. Locomotive Engine S. T. Co.* 110 U. S. 490; S. C. 4 Sup Ct. Rep. 220. Applying this rule to the present case, we are of opinion that the application, to the turning of machine awls and needles from metal, of mechanism old and familiar in the art of wood-turning, is not invention, and is not patentable. We therefore decide that the Murdock lathe was an anticipation of the Spring invention, and that the complainants' patent is void for want of novelty. This view of the case renders it unnecessary for us to consider the other matters urged in defense of the complainants' suit at the argument.

The entry in each case will be: bill dismissed, with costs.

## SPILL v. CELLULOID MANUF'G CO.

(Circuit Court, S. D. New York. August 21, 1884.)

### 1. PATENT LAW—MANUFACTURE OF XYLOIDINE.

Patents Nos. 97,454 and 101,175, for certain improvements in the art of dissolving and manufacturing xyloidine, held invalid by the court.

### 2. SAME—PATENTABILITY—REQUIREMENTS OF CONSTITUTION AND STATUTES.

Under the constitution a patent can be granted only for an *invention*, and under the statute the thing for which a patent may be granted must be not only new and useful, but must amount to an invention or discovery.

### 3. SAME—SOLVENTS OF PYROXYLINE—MODIFICATION OF WELL-KNOWN SOLVENTS.

Before the invention by Spill (1869) the world was informed that dehydrated or strong alcohol combined with camphor was a solvent of pyroxyline. This being the case, the use of alcohol of less strength, and yet of sufficient strength for the purpose, was no invention. *Smith v. Nichols*, 21 Wall. 112-119.

### 4. SAME—BLEACHING XYLOIDINE—ADAPTATION OF FAMILIAR PROCESS.

In the operation of bleaching xyloidine the employment of ordinary bleaching materials (although heretofore not contemplated as adapted for the pur-

pose in connection with this substance) is not patentable. *Pennsylvania R. Co. v. Locomotive Engine Safety Truck Co.* 110 U. S. 140; S. C. 4 Sup. Ct. Rep. 220.

### In Equity.

*B. F. Thurston and H. A. Ruggles*, for plaintiff.

*W. D. Shipman, F. H. Betts, H. Baldwin, Jr., and E. L. Hamilton*, for defendant.

BLATCHFORD, Justice. This suit was brought on two patents granted to the plaintiff. One is No. 97,454, granted November 30, 1869, for an "improvement in dissolving xyloidine for use in the arts." The other is No. 101,175, granted March 22, 1870, for an "improvement in the manufacture of xyloidine and its compounds." On a hearing on pleadings and proofs, a decision was made (18 Blatchf. C. C. 190; S. C. 2 FED. REP. 707) in favor of the plaintiff on both patents. An interlocutory decree was entered June 12, 1880, declaring both patents to be valid, and to have been infringed, and awarding a recovery of profits and damages, to be ascertained by a reference to a master, and a perpetual injunction. The report of the master was filed February 25, 1884. The conclusions of the report, as matter of law, are, as to No. 97,454, that the master, not having been furnished with the necessary *data*, is unable, without further proof, to report any profits; and, as to No. 101,175, that, not having been furnished with the necessary *data*, he is unable, without further proof, to report any profits; and that no evidence had been presented on the accounting, relating to the question of damages from the infringement of either patent. The plaintiff has filed 11 exceptions to the report, and claims, as to No. 97,454, that profits have been shown amounting to \$276,667.66, with interest from June 12, 1880; and, as to No. 101,175, that profits have been shown amounting to \$504,306.25, with interest from June 12, 1880. The defendant has filed six exceptions to the report. The exceptions have been heard, and at the same time the defendant has moved the court, on the report and the exceptions, and the evidence taken in the cause subsequently to the interlocutory decree, both before the master on the accounting and on a motion made by the plaintiff for an attachment for a violation of the injunction, and on all the proceedings in the cause, for a reconsideration of the questions of novelty, patentability, and infringement, passed upon by the court at the time of the entry of the interlocutory decree, in view of the evidence since introduced into the case, and in view of the decision of the supreme court in *Pennsylvania R. Co. v. Locomotive Engine Safety Truck Co.* 110 U. S. 490, S. C. 4 Sup. Ct. Rep. 220, and for a correction or setting aside of said interlocutory decree, and such other orders as may have been erroneously made in this cause.

What was said about No. 97,454, in the former decision, was this:

"The specification states that the 'invention relates to the preparation and use of certain solvents of xyloidine, and which differ from the ordinary known

solvents of xyloidine, in that these *menstrua* which are employed are not, necessarily, in themselves, solvents of xyloidine, but become so by the addition of the bodies, compounds, or substances herein referred to.' It also states that the invention consists in the employment of eight different solvents. Only the second solvent is alleged to have been used by the defendant. It is thus described in the specification: 'Camphor, or camphor oil, or mixture of the same, in conjunction with alcohol or spirits of wine, the same to be employed in about equal proportions.' The claim is in these words: 'The preparation and use of solvents of xyloidine, such as have been before described, so as to render xyloidine more easy of conversion into compounds containing xyloidine, which are suitable for applications in the arts, and for industrial purposes.' The defendant has infringed this claim by using camphor in connection with alcohol as a solvent of xyloidine. The defendant mixes ground and dried xyloidine with pulverized dry camphor, and then immerses the mixture in alcohol until the xyloidine is dissolved. It is dissolved by the joint action of the camphor and the alcohol. Neither alone is a solvent of xyloidine. It is immaterial, so far as the invention and the claim of the patent are concerned, whether the camphor and the alcohol are mixed so as to dissolve the camphor in the alcohol, and then the xyloidine is put into the solution, or whether either the alcohol or the camphor is first mixed with the xyloidine, and then the third substance is added. The bringing of the three together, causing the xyloidine to be dissolved or softened, so as to be more easy of conversion or working into compounds or articles containing xyloidine, is the invention. Making use of the solvent power of camphor and alcohol when in the presence of each other, and of the xyloidine, is the essence of the invention. The use of the camphor and the alcohol in about equal proportions is not the essence of the invention. They are stated by the patentee to be useful in those proportions. But the evidence shows that the real invention was the discovery of the fact that camphor and alcohol, when united, would be a solvent of xyloidine.

"The novelty of the invention of this solvent is attacked, but without success. The evidence is voluminous, and has been carefully considered, with the result that the defendant has failed to show want of novelty. The prior patents adduced and examined are the English patent to Cutting, No. 1,638, of 1854; and the English patents to Parkes, No. 2,359, of 1855; No. 2,675, of 1864; No. 1,313, of 1865; No. 1,695, of 1867; and No. 1,614, of 1868. Parkes' pamphlet, of 1867, and Gmellin's Hand-book of Chemistry, of 1860, have also been considered, as well as the English patent to the plaintiff, No. 2,666, of 1867. No other anticipation than the above seems to be considered by the defendant's expert, and he does not allude to the pamphlet. Another defense relied on is that one Parkes communicated to the plaintiff, in England, the knowledge that alcohol and camphor united were a solvent of xyloidine, and that the plaintiff never made the invention himself. On the whole evidence the defendant has failed to establish this defense." 2 FED. REP. 707, 708.

The Parkes patent, No. 2,359, of October 22, 1855, says:

"It is well known that a solution of gun-cotton has been used principally as a photographic agent and in surgical operations, but my object is to employ colloidion or its compounds for manufacturing purposes generally. The method of dissolving gun-cotton being well known, I do not think it necessary to give proportions, but simply to say that when I use a thin solution I add more of either of the solvents to the gun-cotton; and, if I require a stiff preparation, less of the solvent is to be used. I dissolve gun-cotton, or other similar compounds, in vegetable naphtha, alcohol, methylated or other ethers, or other solvents of gun-cotton."

By "gun-cotton" it is understood was meant what is called "xyloidine," in No. 97,454.

The Parkes patent, No. 2,675, of October 28, 1864, says, in the provisional specification:

"In manufacturing compounds of gun-cotton, and of other vegetable substances similarly prepared, I first distil wood naphtha, or alcoholic spirit, over chloride of calcium, chloride of zinc, or chloride of manganese, using by preference the solid or fused salts. I employ the spirit obtained by this process, alone or combined, with the light spirits from coal naphtha, or other mineral naphtha, as solvents of gun-cotton or analogous compounds."

The full specification says:

"In manufacturing compounds of gun-cotton, I employ a solvent which I prepare by distilling wood naphtha with chloride of calcium."

It then describes the mode of distilling and of obtaining the solvent, and says:

"The solvent thus prepared I add to the gun-cotton, usually in such a proportion as to produce with it a pasty mass. \* \* \* In place of preparing the solvent with wood naphtha, it may be similarly prepared with alcohol. \* \* \* In place of gun-cotton, properly so called, other vegetable substances, similarly prepared, may be employed, and so in each case where, in this specification, the use of gun-cotton is directed."

The Parkes patent, No. 1,313, of May 11, 1865, is for "improvements in the manufacture of parkesine, or compounds of pyroxyline, and also solutions of pyroxyline, known as collodion." It is understood that "pyroxyline" is the same thing as "xyloidine." It says:

"The materials now well known as parkesine consist of pyroxyline dissolved in or softened by solvents, and usually mixed with coloring matters, oils, and substances which control the inflammability of the pyroxyline. In manufacturing parkesine on a large scale, in accordance with the specifications of former patents granted to me, and when manipulating large masses of material, I have found considerable difficulty in the employment of the volatile solvents hitherto used. By the present invention I am enabled to produce large masses or quantities in a much better condition, in a shorter time, and with less solvent in proportion to the pyroxyline, than is possible with the solvents hitherto used. According to my present invention I employ as solvents of the pyroxyline, in this manufacture, nitro-benzole, aniline, and glacial acetic acid. When these solvents are employed, the parkesine can be worked freely in the air; or, these solvents may be used in combination with other solvents. I also, according to my invention, render the ordinary volatile solvents more suitable for use by the addition of camphor. By this means I obtain to some extent the same advantage as by the use of a less volatile solvent. Nitro-benzole and aniline are not rapidly volatile except at a high temperature, and this property enables me to employ them alone, or with other solvents, with very great advantage, as the dissolved pyroxyline and its combinations can be worked in rolls, and, by calendering or spreading machines, with great facility, not drying too rapidly, which enables me with facility to coat telegraph wire, or to make masses or sheets, or to spread the combinations on textile or other fabrics, to produce water-proof cloth for garments, or other articles of any size or color; and the same advantage I obtain when I employ aniline, camphor, or acetic acid; and the combinations, especially those made with nitro-benzole or aniline, can be worked freely in the open air. \* \* \* The following is the manner in which I prefer to

proceed in producing parkesine according to this invention. I take 100 parts of pyroxyline and moisten it with the ordinary solvent, by preference naphtha distilled off chloride of calcium, as is described in the specification of a former patent granted to me, and as is now well understood; and I press out the excess of solvent by an hydraulic press. I then add the other solvent in the proportion of from 10 to 50 parts of prepared nitro-benzole or aniline; or I add 10 to 50 parts of camphor, then 150 to 200 parts of vegetable oil. I use cotton-seed or castor-oil by preference. This mixture I grind in rolls, which are by preference warmed by steam admitted into them. The grinding is continued until all is well combined as a dough or paste, which will be more or less stiff according to the quantity of solvent employed."

The "former patent" thus referred to is the patent No. 2,675, which describes, as a solvent, wood naphtha distilled off chloride of calcium, and the wood naphtha so distilled is what is referred to in No. 1,313 as the "ordinary solvent," and as one of "the ordinary volatile solvents," which may be rendered "more suitable for use by the addition of camphor." And as, according to the language of No. 2,675, a solvent may be "similarly prepared" by distilling alcohol with chloride of calcium, alcohol so distilled must be regarded as an "ordinary solvent," and as one of "the ordinary volatile solvents," which is, according to the language of No. 1,313, to be rendered "more suitable for use by the addition of camphor." No. 1,313, therefore, describes the method of proceeding to be: to moisten 100 parts of pyroxyline with alcohol distilled off chloride of calcium; to press out the excess of solvent; to add 10 to 50 parts of camphor, this being stated to be optional, instead of adding 10 to 50 parts of the prepared nitro-benzole or aniline; to add 150 to 200 parts of vegetable oil; and to grind the mixture in rolls till it is a dough or paste.

The Parkes patent, No. 1,695, of June 8, 1867, sets forth the mode of preparing what it calls a "parkesine compound." It says:

"The parkesine compound I prepare by thoroughly mixing in a vessel, with a mechanical stirrer, one part, by weight, of pyroxyline with six or eight parts of dehydrated or strong alcohol. The alcohol obtained by distilling the commercial alcohol off fused chloride of calcium and other similar substances is suitable. I also add in the mixing vessel cotton-seed oil or castor-oil in the proportion of from 5 to 10 per cent., by weight, of the cotton. The plastic mass of pyroxyline and solvent and oil, which is obtained from the mixer, is passed repeatedly through grinding rolls until perfect uniformity throughout the mass is obtained, and, at the same time, from 2 to 5 per cent. of resin, by preference gum copal of good quality, may be worked in. The grinding rolls should be inclosed in a casing and heated by steam. There are shelves in the casing to enable the workmen to handle the material. The solvent which evaporates is recovered by passing the vapor through a condenser. \* \* \* In place of using alcohol alone for the solvent of the pyroxyline, as above described, I sometimes use a mixture of equal parts of light mineral naphtha, sp. gr. 850, and strong alcohol, sp. gr. 825, or methylated alcohol, sp. gr. 855. I use the mixed solvents in the preparation of the plastic mass in the proportion of 5 or 6 parts to one part of pyroxyline; or I sometimes make a compound solvent of equal parts of light mineral naphtha, purified vegetable naphtha, sp. gr. 840, and alcohol; and, in preparing the plastic mass, I use it in the proportion of 5 or 6 parts to one part of the pyroxyline."

No. 2,359 distinctly states that gun-cotton is dissolved in alcohol. Nothing is said about distilling or preparing the alcohol, or dehydrating it. In No. 2,675 alcoholic spirit is described as distilled over chloride of calcium, and then employed, either alone or combined with the light spirits from coal naphtha or other mineral naphtha, as a solvent of gun-cotton. No. 1,313 describes the use, as a solvent of pyroxyline, of alcohol distilled off chloride of calcium, combined with camphor, the alcohol so distilled being called an ordinary volatile solvent. In No. 1,675 dehydrated or strong alcohol, obtained by distilling commercial alcohol off fused chloride of calcium, is described as a solvent of pyroxyline, either alone, or mixed with light mineral naphtha. In No. 1,313 the pyroxyline is moistened with the ordinary solvent, and then the camphor and oil are added, and the mixture is ground. In the defendant's manufacture the xyloidine and the dry camphor are mixed and then ground together, and the ground mixture is steeped in alcohol. No. 97,454 claims broadly the use of camphor, in conjunction with alcohol, without reference to any order of manipulation. It covers equally the liquid resulting from the combination of alcohol and camphor, to which the xyloidine is added, and the mixing of the xyloidine first with either the alcohol or the camphor, and the addition of the other ingredient.

In No. 1,313 the ordinary volatile solvent, alcohol distilled off chloride of calcium, is used to moisten the pyroxyline, and the camphor is added, which, the patent says, has the effect to render such ordinary volatile solvent more suitable for use. The camphor is stated to be used in place of prepared nitro-benzole or aniline, which is a solvent. The camphor, therefore, co-operates with the alcohol, and the combination acts as a solvent. In No. 97,454 it is said that the solvents of that patent "differ from the ordinary known solvents of xyloidine in that these *menstrua* which are employed are not necessarily, in themselves, solvents of xyloidine, but became so by the addition of the bodies, compounds, or substances herein referred to." In the former decision it was said that the invention of Spill was "the discovery of the fact that camphor and alcohol, when united, would be a solvent of xyloidine." It was also said that the defendant dissolved its xyloidine "by the joint action of the camphor and the alcohol," and that "neither alone is a solvent of xyloidine." Whether either alone is or is not a solvent of xyloidine is of no importance. The defendant employs as a solvent the combination of alcohol and camphor. That is what No. 97,454 claims—employing as a solvent camphor in conjunction with alcohol. What No. 97,454 says is, that the *menstrua* employed are not "necessarily, in themselves," solvents of xyloidine. Yet, if what is employed is essentially a combination of spirits of wine and camphor, it is an infringement of No. 97,454; and, if what was essentially a combination of spirits of wine and camphor was before described as a solvent, No. 97,454 is not valid.

The only point remaining is, as to the use, in No. 1,313, in connection with camphor, of alcohol distilled off chloride of calcium. No. 1,695 shows that commercial alcohol so distilled is nothing but dehydrated alcohol, alcohol deprived of its water, alcohol made strong, and that, alone, it is a solvent of pyroxyline. Commercial alcohol has more or less water. The water acts no part as a solvent. The object is to get rid of the water and avail of the spirit. It is the spirit which is effective. To dehydrate the commercial alcohol, or deprive it of its water, or make it strong alcohol, or absolute alcohol, which is done by distilling it off chloride of calcium, is only to concentrate it, and thus entitle it the better to be called alcohol or spirits of wine. When distilled, it is yet alcohol. When not distilled, it is called alcohol. When strong, made absolute, freed from water, concentrated, it was and is of itself a solvent of xyloidine; and in that state it was, before Spill's invention, described as used with camphor as a solvent of xyloidine. The only question was as to the strength necessary for the alcohol,—as to how much water it might contain and yet be a solvent with the camphor. There could be no invention in using alcohol of less and less strength, until a point was reached, as to weakness, beyond which it would not answer to go. Spill gives the date of his invention as the early part of 1869. Before that the world was informed that dehydrated or strong alcohol was of itself a solvent of pyroxyline, and was instructed to mix it with camphor as such solvent. It must be strong enough in spirits to do its work. Using it of less strength and yet of sufficient strength was no invention. To use dehydrated alcohol with camphor would infringe No. 97,454, and yet it would be to use only what was before described. Under the Constitution a patent can be granted only to an inventor; and, under the statute, the thing for which a patent may be granted must not only be new and useful, but it must amount to an invention or discovery. "A mere carrying forward, or new or more extended application, of the original thought; a change only in form, proportions, or degree; the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means, with better results,—is not such invention as will sustain a patent." *Smith v. Nichols*, 21 Wall. 112, 119.

Being satisfied that due weight was not given to these considerations, in connection with the state of the art, as shown at the hearing which resulted in the interlocutory decree, and that that decree ought not to have been made, no other result can be reached than that effect must be given to this conclusion, and No. 97,454 be held invalid, so far as it claims the preparation and use of camphor in conjunction with alcohol or spirits of wine, as a solvent of xyloidine.

As to No. 101,175, the former decision said:

"There are five claims in the patent. The second alone is alleged to have been infringed. The specification says: 'The second part of my invention relates to the bleaching of xyloidine, and is as follows: When it is desired to

bleach or whiten xyloidine, I bleach it directly after the removal of the acids, and before removing it from the vat. This I do by any of the well-known means, preferring a solution of chlorine or a solution of chloride of lime or soda, which I add to the xyloidine, making use of alternate stirrings, and rest, for a sufficient time, until the xyloidine is whitened. The solution is again drained off, and the xyloidine is repeatedly washed with water in order to remove any excess of bleaching agents or any residue from such agents, when it will be found to be ready to be submitted to pressure in order to free the same from water, and may then be opened out so as to prepare it for drying, dissolving, or other purposes.' The second claim is in these words: 'The process of bleaching xyloidine in the manner herein specified.' That portion of the specification which precedes the statement of the second part of the invention relates to the treatment of vegetable fiber or lignine with acids, to convert it into xyloidine and render it soluble in suitable solvents. The fiber is intimately mixed with the acids by appropriate means, then the acids are strained and pressed from the fiber, which is now xyloidine, and it is subjected to a washing and stirring with water until it is nearly or quite free from acids, and the water is then drained off. The washing is done in a washing vat. The bleaching, as before stated, is done directly after the removal of the acids, and before the xyloidine is removed from the vat. The evidence shows that the real invention of the plaintiff, in this regard, was to bleach xyloidine by ordinary bleaching agents directly after the converting acids had been washed out of it, and before anything had been mixed with it which might interfere with the action of the bleaching agents. This is fairly the sense of the specification.

"Whether the bleaching is done in the washing vat or not, or in a solution of the ordinary bleaching agent, or by such agent not in a solution, are immaterial matters. The essential discovery was that an ordinary and well-known bleaching agent, of the character of chlorine, or chloride of lime, or chloride of soda, if applied to xyloidine, when it had become such, and had been freed from the converting acids, and while it remained in that state, would act upon it to bleach it. The defendant treats paper with acids to make xyloidine, then washes out the acids, then grinds it, and, while it is being ground, applies bleaching powders to it. The evidence is satisfactory that one of such bleaching powders is permanganate of potash, and that it was a well-known and ordinary bleaching agent at the time of the plaintiff's invention. Therefore, infringement is established. It is contended for the defendant that the claim in regard to bleaching does not claim a patentable invention, because it is merely the use to bleach xyloidine of what had before been used to bleach fibrous material not converted into xyloidine. The true view is well expressed by Professor Seeley, the plaintiff's expert. The defendant's expert, Mr. Edward L. Renwick, had cited four English patents—those to Martin, No. 7, of 1864; to Reeves, No. 2,797, of 1860; to Collyer, No. 550, of 1859; and to Reeves, No. 3,293, of 1866—as describing the treatment of vegetable fiber with a solution of chloride of lime or of soda, substantially as the plaintiff's patent describes xyloidine as being treated with a solution of chloride of lime or of soda. Professor Seeley says: 'The patents referred to by Mr. Renwick cover inventions relating to bleaching, by means of ordinary bleaching agencies, the ordinary fibrous substances which are used for clothing, paper stock, etc. I do not find in them anything which has more bearing upon the novelty of Spill's invention than what might be included in the matter which Spill regards and defines as old and well known. Previous to Spill's time, the ordinary bleaching materials and methods were only applied to a peculiar class of substances; namely, those substances of fibrous character which were useful mainly by reason of that fibrous character. Spill's invention brings the utility of bleaching upon a new kind of material, and brings it where it was very desirable, but where it was sup-



posed to be impracticable. It is true that pyroxyline (xyloidine) has a fibrous structure, but this fibrous structure is not any essential or useful property in it. In fact, in this art pyroxyline does not become useful until the fibrous structure is destroyed. Pyroxyline is not useful for any of the purposes to which the materials formerly bleached were applied. Pyroxyline is very different in chemical character and composition from the old bleachable materials. If pyroxyline had not the fibrous structure, probably the question of invention in this case would not have arisen, for then it would have appeared plainly that the case would have been similar to that of (suppose) bleaching charcoal by ordinary bleaching agents. In advance of experiments, the bleaching of a substance like pyroxyline would seem impracticable, almost incredible. The theory of ordinary bleaching is that the coloring matter of goods to be bleached is of a complicated and unstable character, and is destroyed by the powerful chemical action of the bleaching agents, chlorine, oxygen, etc. Inasmuch as pyroxyline, in its manufacture, has been exposed to the action of some of the most powerful chemical agents which are known, it is unreasonable to suppose that any of the unstable coloring matter could be left in it. The bleaching of pyroxyline has often been proposed and attempted; it was especially desirable in this art; but it is my opinion that a chemist would exhaust all other theories before he would think of ordinary bleaching agents for the purpose. The subject had come up in my mind several times before Spill's invention, and I was unwilling to credit the efficacy of his plans until they were actually demonstrated to me. I know of very few inventions where so novel and useful results have been obtained by such simple and unlooked-for methods.' There is no evidence to counteract this view."

The decision in *Pennsylvania R. Co. v. Locomotive Engine Safety Truck Co.* 110 U. S. 140, S. C. 4 Sup. Ct. Rep. 220, makes it impossible to sustain the view heretofore announced as to No. 101,175. The ruling in that case is that "the application of an old process or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated."

In the Martin patent—No. 7, of 1864—fabrics composed partly of vegetable and partly of animal material, and other fabrics and materials, designed to be used in making paper, are boiled with lime and soda or potash in a rotating boiler provided with heaters, and the cleaned rags are then bleached in the boiler by an "ordinary bleaching liquid, consisting of a solution of chloride of lime or soda, with a preparation of sulphuric acid."

In the Reeves patent—No. 2,797, of 1860—jute and other fibers of a similar nature, intended to be made into pulp for paper, are boiled in an alkali, then treated with chloride of soda or lime under heat, then immersed in a bath of chloride of lime of moderate strength, to which is added a small quantity of diluted sulphuric or hydrochloric acid, then boiled in a weak caustic alkaline solution, whereby a large quantity of coloring matter is extracted, then washed, and then treated in a solution of chloride of soda or lime, or both together, so that a perfect white will be the result.

In the Collyer patent, No. 550, of 1859, straw, flax, and other ma-

terials, to be used in making paper, are boiled in caustic alkali, then washed, and then bleached in a chloride of lime solution.

In the Reeves and Muschamp patent—No. 3,293, of 1866—vegetable fibers or common rags, to be made into paper for explosive purposes, are boiled in caustic alkali and washed, and then a solution of chloride of lime is employed to disintegrate and bleach them, a small quantity of diluted sulphuric or other acid being added to the chloride of lime.

The validity of No. 101,175 was rested by the plaintiff at the original hearing, and is now rested, on this alone, as a claim of invention—that he discovered that xyloidine, or soluble gun-cotton, made by the use of substances so powerful as nitric and sulphuric acids, could be bleached by ordinary bleaching materials. The view urged and admitted, as sustaining the patent, was, that no one could or would have believed, in advance, that it was possible. But, the old process of bleaching by ordinary bleaching agents was applied to vegetable fiber, with no change in the manner of application, and with the same distinct result of bleaching. The only difference was that the product was bleached vegetable fiber in the shape of converted gun-cotton, instead of bleached vegetable fiber not so converted. The fact that bleached gun-cotton had not before been known or contemplated did not make the bleaching of it in that way a patentable invention, in view of the state of the art. What was done was to bleach by a process which acted objectively on the material and left it the same thing as before bleaching, but in a bleached state. The bleaching agent did not form with the material a new chemical product. No. 101,175 says that the bleaching solution, after the xyloidine is whitened, is drained off, and the bleached article is repeatedly washed with water to remove any excess of bleaching agents, or any residue from such agents. It also states that the material to be used to make "soluble gun-cotton or xyloidine" is "cotton or other vegetable fibers or lignine, either in their normal condition or after they have passed through any manufacturing process, or the refuse of the same, or the ordinary rags of commerce, either in a white, dyed, or colored condition."

In the case of *Pennsylvania R. Co. v. Locomotive Engine Safety Truck Co.*, the decision of the circuit court was reversed on the question of patentability, and the rules laid down show that under it, and the cases which the opinion cites and approves, the decision in the present case as to No. 101,175 ought to have been that claim 2 set forth no patentable invention.

Within the principle applied in *Wooster v. Handy*, 21 FED. REP. 51, the court has the power and it is its duty to dismiss, with costs, the bill in this case; and it is so ordered.

**MATTHEWS and another, Surviving Executors, etc., v. IRON-CLAD  
MANUF'G Co.**

(Circuit Court, S. D. New York. August 21, 1884.)

**PATENT LAW—IMPROVEMENT IN SODA-WATER FOUNTAINS.**

Alleged infringement of patent for tin-lined steel soda fountains. After investigation of the inventions of plaintiffs and defendant, and a comparison of their several parts each with each, no infringement found.

In Equity.

*A. v. Briesen and H. L. Burnett*, for plaintiffs.

*F. H. Betts and E. C. Webb*, for defendant.

BLATCHFORD, Justice. This suit is brought on four patents: reissue No. 8,834, granted to John Matthews, August 5, 1879, for an "improvement in soda-water fountains," on an application for reissue filed June 26, 1879, the original patent, No. 128,411, having been granted to said Matthews, June 25, 1872, for 17 years from June 13, 1872; reissue No. 8,837, granted to John Matthews, August 5, 1879, for an "improvement in soda-water apparatus," on an application for reissue filed June 26, 1879, the original patent, No. 137,702, having been granted to said Matthews, April 8, 1873; letters patent No. 159,433, granted to John Matthews, February 2, 1875, for an "improvement in vessels containing gases and liquids under pressure;" and letters patent No. 179,583, granted to John Matthews, July 4, 1876, for an "improvement in fountains for containing aerated beverages."

The specification of reissue No. 8,834, referring to the drawings which accompany it, says:

"Figure 1 is an exterior longitudinal view, and figure 2 a central longitudinal section of a fountain constructed in accordance with my improvement. My invention consists in a novel construction of a tin-lined steel fountain for soda-water and other aerated or gaseous liquids, such fountain combining lightness with strength, and being of cylindrical form and uniform dimensions, or thereabout, throughout its length, thereby adding to the convenience of packing and handling; also, being exempt from expansion or permanent lateral distention by the interior pressure to which it is subjected, thus preserving its form and contributing to its durability. Fountains for the like purpose, as previously made, have been largely expansive, and retained the set given to them by extension, and being otherwise objectionable. In the accompanying drawings, A represents a block-tin interior body of cylindrical form, with hemispherical or reduced ends, the same constituting the tin lining of the fountain, and being provided at one of its ends with a neck, *b*, for the introduction of the usual or any suitable connections by which the fountain is charged and its contents drawn off, said neck receiving or having screwed into it a screw-coupling, *c*, secured by a nut and washer, *d*, *e*, on the exterior of an outer end-cap, B, for making the connection. C is the exterior shell or body proper, made of galvanized sheet steel, as may also be the end-caps, B, B<sup>1</sup>, which are soldered to or over the extremities of the same, and constitute, as it were, parts of said body, C, that surrounds or fits over the tin lining, A. The end-caps, B, B<sup>1</sup>, are united to the body, C, without