

cates. The witnesses who dealt in the article, and were familiar with its uses, all testified that they knew of no other purpose that it has ever been used for.

The decision of the circuit court is affirmed.

EASTMAN CO. v. GETZ et al.

(Circuit Court, N. D. New York. November 26, 1896.)

No. 5,954.

1. PATENTS—INVENTION—MACHINES FOR COATING PHOTOGRAPHIC PAPER.

In a machine for making sensitive photographic films by coating the paper with an emulsion, merely increasing the distance between the coating roll and the driven, smooth rolls, to give further time for drying and setting, does not involve invention.

2. SAME—ANALOGOUS USE—MECHANICAL SKILL.

The transfer and adaptation of a machine for coating glass and emery paper to the art of coating paper with gelatine emulsion for photographic purposes is merely an analogous use, and does not involve invention, where the changes required are merely such as would occur to a skilled mechanic when confronted with the problem of applying an emulsion of a different consistency from that formerly employed.

3. SAME—INVENTION.

The Eastman and Walker patent No. 358,848, for a machine for making sensitive photographic films, *held* invalid for want of patentable invention, in respect to claim 3, which comprises a roll of suitable paper arranged to pass through guide rolls, and around a coating roll partially submerged in a trough of gelatine emulsion, and thence over driven, smooth rolls to a hang-up of looping slats, at such distance from the coating roll as to allow the coating to set before reaching the hang-up.

4. SAME—NOVELTY—INFRINGEMENT.

The Eastman and Walker patents Nos. 370,110 and 370,111, both for processes for coating photographic paper, considered, and the former *held* not infringed as to claims 1, 2, 3, and 4, and the latter *held* void for want of patentable novelty as to claim 3.

Philipp, Munson & Phelps, for complainant.

William A. Jenner and George B. Selden, for defendants.

TOWNSEND, District Judge. The bill in equity herein alleges infringement of the third claim of patent No. 358,848, dated March 8, 1887, for a machine for making sensitive photographic films; and of the second, third, and fourth claims of patent No. 370,110, and of the third claim of patent No. 370,111, both dated September 20, 1887, for processes of coating photographic paper; all three of these patents having been granted to George Eastman and William H. Walker, and duly assigned to this complainant. These patents will be considered in their chronological order.

The machine of patent No. 358,848, so far as its construction is material in the consideration of the claim in suit, comprises a roll of uncoated paper suitable for photographic films, arranged to revolve in bearings, passing through guide rolls, and around a coating roll partially submerged in a coating trough of gelatine emulsion, and thence over driven, smooth-faced rolls, to a hang-up of looping slats arranged at such a distance from the coating roll as

to allow the coating to set before reaching the hang-up. Several weeks consumed in the examination of records, briefs, and paper exhibits, covering more than 4,000 pages, have demonstrated that this case more forcibly illustrates "the extensive practice which now prevails in patent causes, of stuffing the record with prolix cross-examinations and irrelevant testimony," than *Ecaubert v. Appleton*, 15 C. C. A. 73, 67 Fed. 917, or *Thomson-Houston Electric Co. v. Winchester Ave. R. Co.*, 71 Fed. 192. The patents in suit cover a machine and processes so simple as to require only brief expert testimony to explain certain details of operation. Only two or three of the constructions of the prior art require extensive examination or discussion.

The third claim of patent No. 358,848 is as follows:

"(3) In an organized machine for making sensitive gelatine argentic paper for photographic use, the combination of one or more driven, smooth-faced rolls for maintaining the coated paper in motion, a suitable hang-up machine, and a coating mechanism consisting of a smooth-faced roll partially submerged in the coating material; said coating roll being arranged at such a distance from the hang-up machine as to allow the gelatinous coating to set before it reaches the looping slat, substantially as described."

The defendants contend, as to said claim, as follows:

"(1) That it is void, because it appears from the file wrapper and contents that the original specification described a single driven roll, and that this was stricken out by an amendment requiring a construction with two or more rolls, and that there is no warrant in the specification for the claim of a single driven roll, which was allowed through inadvertence. (2) That it is either anticipated or void for want of patentable novelty, in view of the state of the prior art. (3) That it is further void because it covers a mere aggregation of ordinary coating devices, and a hang-up, each of which was well known in the art, without any co-operating action between them. (4) That, if sustained at all, it must be confined to a claim for two or more driven, smooth-faced rolls, in which case defendants do not infringe, as they use a single feed roll, covered with carding cloth, which has been specifically disclaimed by the patentees."

In view of the facts above mentioned, it has seemed best to state only the conclusions reached upon the single question of patentable novelty in view of the prior art. The complainant claims that:

"The patented process and machine attains the extreme delicacy required for bromide coatings by providing means for maintaining the evenness of the coating until the gelatine has set, these consisting of the smoothing roll or rolls, which eliminate the hollows, and check and reverse the tendency to flow. * * * And, by the uniform and reliable action of the hang-up, the delicate product is preserved and stored until, by drying, it is completed, instead of being injured or destroyed, as it would be by ordinary handling."

For the purpose of considering the question of patentable novelty, it will be assumed that complainant's contention, as above stated, is correct.

Prior to this alleged invention, various machines for coating paper for photographic and other purposes had been made, and publicly described. The state of the prior art is sufficiently shown by the *Colas and Bertsch* German patents, the *Sarony and Johnson* British patent, the *Johnson* British and French patents, the *Beaurain and Delaunay* French patents, and the *Allen and Rowell and Anthony* machines. Prior to said alleged invention, *Walker*, one of the patentees, had seen the *Allen and Rowell* machine, and *Eastman*, the

other patentee, had used the Anthony machine, as to which his testimony is as follows:

"In what respect, if any, did the coating device (meaning thereby the emulsion roller, the emulsion tank, and the emulsion warming apparatus) differ from the coating device shown in your patents in this suit? A. I think not at all.

"The coating device in the machine that you received from Anthony & Company about 1882 was then substantially the same in construction and mode of operation as the coating device shown by your patent in this suit? A. So far as those parts are concerned, they are.

"Did the coating device in this said Anthony machine apply the emulsion to the face of the paper in a uniform manner, or prevent an excess of the emulsion at the rear side of the paper? A. It did."

Mr. Eastman's testimony as to the coating devices used by them is as follows:

"You did adopt for practical use in your machine this coating device, which was already well known in the art? A. We finally adopted the smooth-faced, submerged coating roller.

"Without making any substantial modifications in it beyond a change of dimensions? A. Not in the roller.

"Nor in the trough or heating devices? A. No."

The coating devices here referred to are those of the Anthony and Allen and Rowell machines. These admissions render it unnecessary to discuss the construction of the Anthony machine.

German patent No. 12,607, granted July 29, 1880, to Colas, and a modification thereof in German patent No. 18,535, granted to Bertsch, August 3, 1881, describe machines for applying sensitive liquids to photographic papers. The solution to be used in the Colas patent is for coating blue-print paper. The Bertsch patent describes a machine for applying sensitive liquids on one side of solar print paper. Each of these machines comprises a partially submerged coating roller, or a submerging bar,—its equivalent,—and driven feed rollers. Hang-ups are referred to, but not described. These constructions would receive more extended consideration were it not for the emphatic testimony introduced by complainant, that they were inoperative for coating paper with bromide emulsion. The testimony as to the practical working of the various machines of the prior art as constructed and operated by the opposing parties is incomprehensibly conflicting, and therefore unsatisfactory. The complainant claimed that, in the use of these machines, the liquid was filled with bubbles, and the paper wrinkled, because the feeding disk rested upon the edges of the paper. The first of these objections is immaterial upon the question of infringement, for the surface of defendants' emulsion is kept in constant agitation. As to the second objection, Mr. Eastman, two years and a half after the application for the patent in suit, advocated, in a subsequent application, the use of such collars bearing upon the edges of the paper as producing a superior quality of paper. In the Johnson French patent, the paper ran over a belt, and it would therefore be impracticable for bromide paper. It shows pegs apparently adapted for a hang-up. There is a suggestion in the Johnson English patent of dispensing with the belt, and substituting a driven roll, such as is described in the machine patent in suit. The descrip-

tion, however, is somewhat indefinite, and these two patents are only material as suggesting the knowledge of hang-ups, and the use of a driven roll in order to keep the surface of the paper smooth. British patent granted to Sarony and Johnson, May 18, 1878, for a machine for making carbon or pigment paper, comprises a combination of all the elements covered by the third claim in suit. Although said claim shows some modification in their arrangement, yet, if said machine were satisfactorily proved to be operative, such proof alone would dispose of the question of patentable novelty in this case. Eastman admits that said patent describes the coating roll, trough, heating apparatus, and driven, smooth-faced rolls of his machine.

The testimony of complainant that a model constructed by it was inoperative will not be discussed, because the conditions under which it was tested did not permit a fair test of its practicability. The testimony of defendants as to the operativeness of their model is not satisfactory, in view of their failure to comply with complainant's request to inspect it in operation. Their alleged successful results were accomplished on machines embodying the described Sarony construction, with certain changes justified by the state of the art at the date of the Sarony and Johnson patent. The complainant admits, however, that with the second model constructed by it, and embodying said modifications, it successfully filled the machine with 20 long rolls of 14-inch heavy paper. In view, however, of Eastman's admission that the Sarony model constructed by him was successful three times out of four in coating bromide paper, and of the striking similarity between the machines of Sarony and of the patent in suit, and of the analogous uses for which they were employed, and of the slight modifications required to adapt it to the new use, which confessedly were old, I think this patent alone shows lack of patentable novelty in the claim in suit.

It is unnecessary to discuss the hang-ups or the claim for the combination of the other parts of the machine with this mere frame for drying the product, because such hang-ups were well known in the general field of arts, requiring a drying process, and therefore, even if there be co-operative action, there is no invention. The specification of the patent says: "Our invention involves * * * a hang-up frame of any approved construction." Eastman says: "Q. The Sarony and Johnson patent shows that a paper-coating device, similar to that used in your patent, was known as early as 1878, was it not? A. Yes; at least as early as that, and the hang-up was known when I was four years old." There is a conflict of expert testimony as to whether it is more difficult to produce an even coating with carbon emulsion or with bromide emulsion. It will, however, be assumed that the bromide emulsion required more delicate treatment. The Allen and Rowell machine, constructed and used as early as 1877, was adapted for coating paper with various gelatine emulsions, principally carbon films. It comprised a roll of paper passing through a friction roller into a submerged roller, and afterwards upwardly over rollers onto a belt supported on a driven

roller over which the paper passes. It did not have the hang-up of the patented combination, but Messrs. Allen and Rowell testify that they knew of such hang-ups long prior to the date of the complainant's invention, and that the only reason why they did not use them was that they had insufficient room and insufficient business to warrant the expense. As already stated, Walker, prior to the date of the patent in suit, had seen this machine in operation.

It is perhaps not satisfactorily proven that the Allen and Rowell machine coated bromide paper commercially prior to the invention in suit. That it made good carbon paper is admitted by complainant. That it made some bromide paper experimentally, and some for the market, which was sold and practically used, is sufficiently shown. That it was not a great success commercially appears to have been largely due to defects in the emulsion, rather than in the machine. Complainant claims that it reproduced the Allen and Rowell machine, and attempted to coat paper upon it, and failed. The evidence as to the way in which this machine was constructed and operated has failed to satisfy me that the machine could not have been successfully operated. The same objections do not apply to the actual operation of the original Allen and Rowell machine by the representatives of the defendants. The testimony as to their experiments with this machine since the bringing of this suit dispenses with the necessity of further discussing the question of prior use. It is established, to the satisfaction of the court, that the machine, operated under exceptional circumstances, it is true, made good, salable bromide paper, from which satisfactory enlarged prints were subsequently developed. The complainant contends that the tests to which this paper has been exposed are not such as to indicate whether or not it was a salable paper, and it gives various reasons in support of this view, and further claims that it was not given a proper opportunity to test this paper. It appears, however, that defendants offered to permit complainant's experts to examine the paper, either at New York or at Buffalo, provided complainant would pay certain expenses connected therewith, and that this offer was declined. In view of the great importance of this evidence upon the question of the operativeness of this machine, this court, without passing upon the question as to whether this opportunity was or was not a proper one, is not satisfied that the objections to the tests made by defendants are sufficiently proven. It may be further remarked, in support of this conclusion, that it is not satisfactorily shown that the alleged defects in the bromide paper thus coated on the original Allen and Rowell machine, or the proved defects in that coated on the machine constructed by complainant, were such as to show that the original machine was not a practical one. Furthermore, Eastman, one of the patentees of the patent in suit, testified, as to the Allen and Rowell machine which he built, as follows:

"Q. What particular feature of the work described in the third claim did it not cover? A. It did not make an even coating,—uniform coating. Q. And yet the coating device in that machine is substantially the same as that shown in

your patent, and used in all your bromide-paper machines? A. I have already said that the coating roll was the same, but it did not co-operate with the other parts like our machine to do the work. Q. Would a patent practice your invention if the coated paper from one of the top rolls of the Allen and Rowell machine were delivered to a hang-up similar, for instance, to that shown in the Van Deventer patent of 1858? A. If the hang-up device was located at a sufficient distance to allow the emulsion to set before it reached the sial, and the hang-up was an operative one."

It also appears that other objections to the paper produced on complainant's model of the Allen and Rowell machine were due to its operation by hand by one not familiar with it, and that said objections might probably have been obviated by an experienced hand operator, or by machinery. This Allen and Rowell device contained every element of the patent in suit, except the hang-up. It is urged that the roller, being covered with cotton cloth, was not smooth-faced. In that sense, the rollers of defendants' machines are not smooth-faced. It is claimed that it was not located at a sufficient distance to allow the emulsion to set except under most favorable circumstances. But to increase the distance between the rolls in order to give further time for drying and setting does not involve invention.

Counsel for complainant admit that the driven, smooth-faced rolls of the claim in suit are old, but contend that their function as ironing rolls is new. For the discussion of this contention, it will be assumed that said claim is not limited by the specification to a series of such rolls; and that defendants' rolls are feed rolls, and infringe said claim; and that complainant's rolls were here used for the first time to smooth out the hollows in paper coated with bromide emulsion; and that, in the operation of the machines of the prior art by the parties, they failed to successfully produce bromide paper. In that event these patentees have first described and claimed the use of the old feed or smoothing rolls with a new kind of gelatine emulsion, and have, as a result, ironed bromide paper, instead of carbon or blue-print paper. But this is merely a double use,—the application of an old device to a new subject-matter.

If, resolving every contention of fact in favor of complainant, it be assumed that this patent described and this claim covered a new machine, which secured a new result, and which is infringed by defendants, it would still fail to show any consideration for the claimed monopoly of the patent. The witnesses and counsel for complainant assert that the new result was accomplished by "the carrying roll * * * which kept the coating even, by smoothing out the hollows in the paper, and checking and reversing the tendency to flow until the coating became set, and the hang-up * * * placed at the proper distance, * * * which had the capacity of receiving the coated paper, and storing it until dry, without the injurious and destructive effects upon such paper of ordinary handling." But they admit that the older devices thus coated, received, stored, and dried fabrics; that the only material modifications of the patent consisted in increasing the distance between the rollers and hang-ups, so as to allow the thinner solution to stiffen before

reaching the hang-ups, and in adding the old hang-up to perform its old functions to secure the old results with a new coating. Inasmuch as this application of the old devices was to an analogous use, and as the changes made by the patentee were such as would have occurred to any skilled mechanic to whom was first presented the problem of applying an emulsion of a different consistency from that formerly employed, there is no patentable novelty in the alleged invention.

French patent No. 137,736, granted July 10, 1880, to Delaunay, for processes and apparatus for the manufacture of glass and emery papers, was not seasonably introduced in evidence, and is therefore only relevant as showing the state of the prior art. It shows the same parts, same arrangement, same form of construction, and same operation in a combination substantially identical with that of the claim in suit. That it also describes a sanding device is immaterial. This may be omitted, and the description evidently contemplates the operation of coating the paper with glue, independent of the use of sand. The difference between the Delaunay coating by transference, and the patented coating by submergence, is immaterial, as both were old, and were known equivalents, and such a modification would not constitute invention. The single question is whether there is such a transfer from one branch of industry to another as constitutes invention. The question must be answered in the negative, for the following reasons: The process of coating paper with glue is closely allied to, if not identical with, that of coating paper with gelatine. The Delaunay patent separately describes such a process by means of an apparatus not materially distinguishable from that of the patent in suit. The modification by running the paper in an opposite direction was a well-known one, to which the coating rolls were already adapted, and which was common in the general art of coating rollers. It may be assumed, however, that the patented machine accomplished a new result. Even if such new result be not merely a higher finish and greater beauty of surface, due to the perfection of the machinery employed, and amounting to "a mere carrying forward or mere extended application of the original thought," yet, as the trifling changes were such as must have occurred to any mechanic skilled in the art of coating paper, as soon as the exigencies of the increased use of bromide paper presented the problem of increase in quantity, it does not show patentable novelty. It is well settled that a mere change of location of one of the elements of a combination is not patentable. *Kay v. Marshall*, 2 Webst. Pat. Cas. 36; *Phipps v. Yost*, 26 Fed. 447; *Machinery Co. v. Bunnell*, 27 Fed. 810.

It may well be, as contended by complainant, that "in no variety of coating machines had the distance of separation * * * from the hang-up been a matter of significance or importance." It may well be that the patentees first conceived the idea of the convenience and utility of adding to a coating machine a hang-up at such a distance that the thin solution would dry before it reached the hang-up, and that, by the addition of hang-ups, bromide paper could be

coated in larger quantities. The question involved, however, is not so much as to their priority in the perception of the problem, as to the patentable novelty of the means they furnished for its solution. Cary was the first to adapt the process of bluing to furniture springs, so as to resist strain, and thereby revolutionized the art of making furniture springs; but the supreme court of the United States, reviewing the case, held 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 had not before been contemplated." *Manufacturing Co. v. Cary*, 147 U. S. 623, 637, 13 Sup. Ct. 472, 477.

Rosenfield was the first to adapt mechanism for opening and closing apertures distant from the operator to railway car gates; but the supreme court of the United States, quoting from the opinion of Judge Wallace, says:

"It rarely happens that old instrumentalities are so perfectly adapted for a use for which they were not originally intended as not to require any alteration or modification. If these changes involve only the exercise of ordinary mechanical skill, they do not sanction the patent; and, in most of the adjudged cases where it has been held that the application of old devices to a new use was not patentable, there were changes of form, proportion, or organization of this character which were necessary to accommodate them to the new occasion. The present case falls within this category." *Aron v. Railway Co.*, 132 U. S. 90, 10 Sup. Ct. 24.

In *Knapp v. Morss*, 150 U. S. 228, 14 Sup. Ct. 81, the court said:

"All that Hall did was to adapt the application of old devices to a new use, and this involved hardly more than mechanical skill."

Patents Nos. 370,110 and 370,111, of even date, are for processes of coating photographic paper. The claims of patent No. 370,110, as to which infringement is alleged, are the following:

"(1) The herein-described method of producing uniform coatings upon continuous webs or strips of fabric, which consists in applying the coating material in a fluid condition evenly upon the face of the web, and in changing the flow of the coating upon the web, to regulate and maintain its uniformity, and maintaining the web in motion, and its coated surface unobstructed by contact with foreign bodies, until the coating has set or hardened sufficiently to prevent running, substantially as described.

"(2) The herein-described improvement in the art of producing photographic paper, which consists in applying to one face of a web of paper a thin uniform coating or surface of fluid gelatino argentic emulsion, by causing the paper to emerge from the level surface of a body of emulsion, and subsequently maintaining the coated web flat and in motion continuously and uniformly in the same direction, and the surface of the coating undisturbed by contact with foreign substances, until the gelatine has set or stiffened sufficiently to prevent running, substantially as and for the purpose set forth.

"(3) The herein-described process of producing gelatino argentic fabric for photographic reproductions, consisting in applying to a moving continuous web of fabric a uniform layer of sensitive gelatino argentic emulsion, keeping said web in motion, and the coated side unobstructed, until the coated gelatine is set or stiffened sufficiently to prevent flowing, and finally drying said coating.

"(4) The herein-described method of producing uniform coatings upon continuous webs or strips of fabric, which consists in applying the coating material in a fluid condition evenly upon the face of the web, and subsequently maintaining the web in motion, and its coated surface unobstructed by contact with foreign bodies, until the coating has set or hardened sufficiently to prevent running, substantially as described."

The third claim of patent No. 370,111, the only one as to which infringement is alleged, is as follows:

"(3) The herein-described continuous process of producing gelatino argentic fabric for photographic reproductions, consisting in applying in a suitable non-actinic light to a moving continuous web of fabric a uniform layer of sensitive argentic fluid emulsion, keeping said web in motion, and the coated side unobstructed, until the coated gelatine is set or stiffened sufficiently to prevent flowing; and, finally, while the web is in motion, and the coating being applied, depositing that part of the web on which the coating has set or stiffened at rest with relation to its supports to dry."

The defendants do not infringe these claims, either by "applying the coating material evenly upon the face of the web," or by "causing the paper to emerge from the level surface of a body"; for they use an agitator constantly in motion in the trough, in order to keep the emulsion stirred up, and thereby to obtain a better result. It has not been proved by satisfactory evidence that they change the flow of the coating upon the web, as claimed in said third claim, and described in said process, namely, "so that at one point it (the web) will travel upward, and subsequently downward, or vice versa, thereby arresting or changing the direction of the flow." Defendants have infringed the third claim of patent No. 370,111, by depositing the coated web to dry during the application of the coating to another part of the web. But, inasmuch as the prior art shows that such a process of depositing a coated substance on supports to dry was common to the whole field of practical arts long before the alleged invention, I am unable to find any patentable novelty therein.

In view of the conclusions reached, it is unnecessary to pass upon the motions to suppress testimony. Each party has introduced irrelevant testimony, and witnesses on each side have made statements which, for various reasons apparent on the record, are entitled to little or no weight. In these circumstances, it has seemed desirable to disregard such testimony, and to decide the questions presented upon such evidence as was not open to said objections. The motions to suppress testimony are denied. Let a decree be entered dismissing the bill.

THOMAS v. ROCKER SPRING CO.

(Circuit Court of Appeals, Sixth Circuit. October 12, 1896.)

No. 395.

1. PATENTS—ACQUIESCENCE IN EXAMINER'S RULINGS—LIMITATION OF CLAIMS.

An applicant, after inserting limitations in the specifications and claims pursuant to the requirements of the examiner, cannot qualify or minimize the effect of his acquiescence by protesting that the action taken was not an acquiescence, and that he expects to insist on a construction of the amended claims which will cover the same ground as the rejected claims. If he dissents from the examiner's ruling, he should take the question to the appellate tribunals of the patent office, and thence to the courts. 68 Fed. 196, reversed.

2. SAME—LIMITATION—TILTING CHAIRS.

The Connolly patent, No. 354,043, for a "tilting and rocking chair," is not for an invention of a primary character entitled to a wide range of equivalents;