opinion. Circuit Judge SANBORN and myself had previously arrived at the same conclusion.

The other assignments of error have been carefully examined and considered, and found to be without merit.

The result is that the judgment of the lower court must be affirmed.

APPLETON et al. v. ECAUBERT.

(Circuit Court, E. D. New York. April 19, 1894.)

1. PATENTS—WHO ENTITLED—PRIORITY OF INVENTION.
   In a suit between owners of rival patents, each praying cancellation of the other's patent under Rev. St. § 4898, the evidence was substantially the same as that in interference proceedings in the patent office, in which priority had been awarded to complainant's assignor, who was shown to have been the first to embody the invention in a perfected machine, as against defendant, whose only prior effort was an abandoned experiment, and who, if he had previously conceived of the invention, as he testified, did not reduce it to practice, but remained for years inactive, without adequate excuse. *Held*, that the issue must be determined in favor of complainant.
2. SAME.
   The Ecaubert patent, No. 434,539, for a method of ornamenting watch-case centers and other like articles, canceled, as containing nothing patentable not covered by the prior invention of the Hofmann patent, No. 435,835.

This was a suit by Daniel Fuller Appleton and others against Frederic Ecaubert for cancellation of a patent.

On the 31st day of December, 1887, Adolph W. Hofmann, the assignor of Appleton et al., filed in the United States patent office an application for a patent for an improved method of ornamenting watch-case centers and other like articles, which application was, on the 11th day of January, 1889, put in interference with an application of Frederic Ecaubert, filed February 13, 1888, for a similar invention. Testimony was taken at large in the interference, and on the 2d day of August, 1890, final judgment of priority was rendered in favor of Hofmann by the commissioner of patents. While the interference was still pending, undetermined, Ecaubert filed a second application, covering the subject-matter at issue in the interference, which application was allowed to go to patent by the examiner after the decision in the interference case, and resulted in letters patent No. 434,539, dated August 19, 1890. On September 2, 1890, patent No. 435,835 issued upon the Hofmann application, and, on the 10th of September following, Appleton et al., as owners of the Hofmann patent, filed a bill in the eastern district of New York, under section 4898, Rev. St., against Ecaubert, as the owner of the Ecaubert patent, praying the cancellation of the latter patent. Ecaubert answered the bill, and filed a cross bill praying in turn the cancellation of the Hofmann patent.

The opinion of the commissioner of patents on appeal from the decision of the examiners in chief in the interference proceedings between Ecaubert and Hofmann was as follows:

Mitchell, Commissioner. This controversy relates to an improved method of ornamenting the peripheries of watch-case centers and other like articles; including also, as stated in the letter declaring the interference, the claims of the respective parties for combinations to carry into effect said method of ornamenting. Prior to the invention of the method in controversy watch-case centers had been ornamented by hand engraving. They had also been ornamented by a knurling process, in practicing which an engraved knurl or die roll was continuously rotated in contact with the outer face of the watch-case center, the latter being mounted upon a rotating

chuck. Another process was known as the "spinning process." The spinning process was invented and patented by Ecaubert, one of the parties to this controversy. In practicing it a matrix die was used, having a design or pattern upon its inner circumference. Into this matrix the watch-case center was placed, and then, by a small pressure roller revolving upon the inner face of the center, the latter was spun or expanded outward, so as to take the impression from the pattern on the inner circumference of the die. The matrix die was made in parts, so that it could be removed after the ornamentation was produced. The last method was somewhat expensive; the second, difficult to employ, and of restricted utility; and it is inferred from the testimony that the first method was the one more commonly in use when the present invention was introduced. The present method is expressed in the language of the issue as follows: "The improved method hereinbefore described of ornamenting the peripheries of watch-case centers or other like articles; the same consisting in holding the surface of an embossing die in contact with the surface of the article to be ornamented, imparting a reciprocating or reversing rotary movement to one of said surfaces, and at the same time laterally moving the point of contact of the die with the surface being ornamented, as set forth." The examiner, in declaring the interference, stated that the issue was covered by Ecaubert's first, second, and third claims, by Hofmann's first and second claims in Case A, and by Hofmann's single claim in Case B. Ecaubert's claims, thus declared to be in interference, are as follows: "(1) The combination, with the knurl or ornamenting wheel, and the mandrel and chuck or tool for holding the watch-case center or other article to be ornamented, of a shaft and adjustable crank pin, and a rod from the crank pin, connected with the mandrel, for turning the mandrel first in one direction and then in the other direction, substantially as set forth. (2) The combination, with the knurling tool and its holder, of a slide for supporting the same, a rack bar connected with the holder of the knurling tool, a pivot stud for connecting the holder and rack bar to the slide, a slide rest for supporting the slide, a base upon which the slide rest is supported, and a pinion at the center of the base, with which the rack bar comes into contact, substantially as set forth. (3) The combination, with the knurling tool and its holder, of a slide and slide rest, and a base upon which the knurling tool and its holder are supported, and a pivot at right angles to the axis of the knurling tool, connecting the holder to the slide, to allow the holder to be swung as the said knurling tool acts upon the convex surface of the watch-case center or other article perpendicularly, and without lateral slip, substantially as set forth." Hofmann's claims are as follows: "Case A. (1) The combination of a rotary embossing roll or die having an engraved periphery, a pivoted holder whereby said die may be inclined or moved laterally, a work holder or chuck, and means for imparting to said chuck reversing rotary movements of predetermined length, and thereby keeping the relief lines of the die in operative engagement with the impressions made by it in the case center or other article held by the chuck, as set forth. (2) The combination, with the embossing roll, its holding devices, and the chuck, b, of the gear, q, affixed to the shaft carrying said chuck, the rack, r, engaged with said gear, the countershaft, v, and the pitman, s, connecting said rack with an eccentric wrist pin on a crank wheel on the shaft, as set forth. Case B. The improved method hereinbefore described of ornamenting the peripheries of watch-case centers or other like articles; the same consisting in holding a portion of the surface of an embossing die in contact with the surface of the article to be ornamented, said portion being less in width than the entire width of the ornamenting surface of the die, imparting a reciprocating or reversing rotary movement to one of said surfaces, and at the same time laterally moving the point of contact of the die with the surface being ornamented, thereby laterally extending or widening the area of ornamentation, as set forth."

It will be noted that in declaring this interference the fact that a process is necessarily a different invention from a machine or apparatus (Ex parte Atwood, Com'rs' Dec. 1888, 74; Crane v. Merriam, 51 O. G. 1783) was ignored. But that fact may now be disregarded, as, in the event that Ecaubert should be found to be the first inventor of the process, his equal right with Hofmann to make a claim therefor would be undoubted, in view of the history

of the proceedings in the case. Hofmann's applications were first in the office, and the burden of proof is upon Ecaubert, under rule 116. In Bruce v. Traver, 43 MS. Dec. 260, the present commissioner said: "When the rule places the burden of proof upon the last applicant, it means precisely what it says. It announces to parties before the office that the last applicant must prove his case or fail. Nor is the rule an arbitrary one. It has its foundation in the same legal principle which finds expression in the maxim 'prior tempore potior jure.' The senior party litigant has a right to expect that the rule will be applied, and that he may be absolutely silent until a prima facie case is made out against him." Has, then, Ecaubert proved that he was the first inventor (1) of the apparatus for practicing the process, and (2) of the process itself?

As to the apparatus for practicing the process:

Ecaubert testifies that in the year 1879 he made an ordinary watch-case maker's lathe, with a "gear wheel on the spindle, and a rack and an adjustable crank and countershaft," to make the spindle go backward and forward; that he intended to ornament watch-case bezels and watch-case centers by means of engraved rollers to be pressed against the article to be ornamented; that he used the common knurling quadrant which was in use at that date to support the engraved roller or milling wheel; that the apparatus was tried, and seemed to work satisfactorily, as far as concerned the reciprocating motion, but the milling wheel slipped sidewise, and injured the looks of the ornaments; that after this trial the parts, other than those constituting it "an ordinary watch-case maker's lathe," were taken off and stored away; and that he has since tried to get hold of them, but they could not be found. If all the testimony as to what was done in 1879 be credited, it must still be considered that this effort on the part of Ecaubert was nothing more than an abandoned experiment. Ecaubert himself testifies that the machine "was done away with, and did not remain in use," on account of the milling-wheel slipping over the article sidewise. Indeed, what was done is referred to by counsel for Ecaubert, in his brief, as "this experiment;" and, in the summing up of Ecaubert's argument at the close of the brief, it is only claimed that it constitutes evidence "that Ecaubert conceived the invention now in controversy in 1879." It does not appear, so far as I can ascertain from the record, that, from 1879 to the present time, Ecaubert has ever made or tried to make a machine containing the elements specified in his first claim—that is to say, the elements necessary to practice the process of the issue—without producing the backward and forward motion by hand. Nor did he make a model or a drawing, or even a sketch, until he came to apply for a patent. Meanwhile, in the early part of December, 1887, Hofmann conceived of the invention in controversy, applied for a patent on the 31st day of December, 1887, and before that time had a machine in operation for the practical knurling of gold watch-case centers for the market, which machine contained all the mechanical elements of the first claim of Ecaubert, and both claims of Hofmann's application, Case A. Subsequently, other machines were built, and a considerable industry came into being, based upon Hofmann's invention. I have not overlooked what was done by Ecaubert in 1885. It is not claimed on his behalf that he at that time built a machine capable of transforming the rotary motion of the countershaft into the backward and forward motion of the spindle. The bearing of what was done in 1885 upon the question of priority, as relates to the process, will be considered hereinafter. So far as the machine or apparatus is concerned, the question is simply whether Hofmann's prima facie case, based upon his earlier applications, preceded by actual reduction to practice, is overcome by an abandoned experiment of Ecaubert in 1879. Of course, there is but one answer to that question, which is that Ecaubert, not having proven either that he was the first to reduce to practice, or that he followed up his conception with diligence, has failed to discharge the obligation which the burden of proof placed upon him.

(2) As to the process:

The principal difference between Ecaubert's case, as it stands related to the process, from his case as it stands related to the apparatus or mechanism, arises upon the testimony relative to what was done in 1885 in the way of knurling watch-case centers upon a machine operated by pulling the

belt up and down by hand. It appears that in May, 1885, Ecaubert made a tool like that introduced in evidence, and marked "Ecaubert's Exhibit A," some of the parts of that exhibit being parts of the tool made at that time. Ecaubert says that he succeeded by means of this tool in "overcoming the slipping sidewise of the knurl on the articles to be ornamented." He further states that he knows he made this tool in 1885, for he says he delivered to Alfred Humbert, of Philadelphia, on May 20, 1885, a center-turning lathe combined with a pendent-turning lathe; that "this particular part that makes the knurl move sidewise, and holds the knurl in position, was made to be delivered with that center-turning lathe to the said Alfred Humbert;" that, after considering that he did not want this invention to become public property, he "took these particular parts off from the lathe, and substituted a regular knurling quadrant, of the ordinary kind;" that these "particular parts" remained in his shop from the time they were made, in 1885; that the knurling-tool, the stock that holds it, the V-slide, the rack connected to the stock, the stationary pinion, and the block below the bed, are the parts of the exhibit that were made in 1885, and that the other parts—the quadrant, plate, and stud, the handles, and the V-shaped-groove stock—were made in 1889, or, as he states it, "I made them only this year, 1889, simply because I wanted to show how it was to work." It is to be borne in mind that this machine made for Humbert was a machine having a continuous rotary motion, and designed to ornament watch-case centers by the second process already alluded to. It is to be borne in mind that Ecaubert testifies that the Exhibit A was "made to be delivered with that center-turning lathe to the said Alfred Humbert." Ecaubert's Record, Q. 19, p. 9. Exhibit A, therefore, was not made with special reference to the difficulty developed by the 1879 experiments in knurling by a backward and forward movement; but it was made to be used in knurling by the old and well-known rotary process; and any use, experimental or otherwise, of Exhibit A, in practicing the process of the issue, must have been incidental to the main purpose for which it was built.

All the testimony as to the practicing of the process in controversy in 1885 relates to the use of this Exhibit A in connection with the Humbert machine designed to practice the continuous rotation process. It should be remembered that after the Humbert machine was sent away the original of Exhibit A was in a dismantled condition, parts of it having been used in making the ordinary quadrant with which the machine was finally equipped. To be sure, some testimony is found in the record as to the use of parts of Exhibit A after the Humbert machine was shipped away; but, as will be seen hereinafter, it does not relate to the practicing of the present process. Wilhelm, who worked for Ecaubert continuously after 1880, testifies to the use of Exhibit A on the Humbert machine. He says, "By pulling the belt backward and forward, we rotated the spindle." This certainly looks like practicing the process. On cross-examination it distinctly appears that the backward and forward motion was to get "the impression all round," and that he "did rotate the work continuously" after he got "the impression all round." Now, a single complete rotation would be disastrous to the process in controversy. Wilhelm's testimony not only fails to show the practice of the process, but, so far as it goes, shows the contrary. A preliminary backward and forward motion is necessary to the continuous rotary process, but a single, complete rotation would be fatal to the forward and back process. As to what was done after Humbert's lathe was sent away, Wilhelm testifies as follows: "Question 17. Has any portion of Exhibit A been made use of, to your knowledge, in Mr. Ecaubert's shop, since the lathe was sent to Mr. Humbert's? Answer. Yes, sir. Q. 18. What was done with these parts? A. I used it for making barley-corn knurls to make dies with. Q. 19. About when was this? A. This was in the shop in which we are now. I could not state exactly when it was. May have been three years, or probably four years ago. Q. 20. Can you produce any such barley-corn knurl so made as referred to in your answer 18? A. I can. This is one of them. Q. 21. In making this knurl (Exhibit C), was there a rotary motion given to the same, or a backward and forward alternating motion? A. A rotary motion." This testimony shows that the use to which the remaining portion of Exhibit A was put after the lathe went

to Humbert did not involve the present process, nor anything like it. Ecaubert testifies as follows as to what was done after the lathe was sent away: "Question 26. Have you used any of the parts of Exhibit A that were made in 1885 for any purpose since the lathe was delivered to Mr. Humbert? Answer. Yes. Q. 27. What for, how, and where? A. In my own shop, for making fancy knurls. Q. 28. What were these fancy knurls for? A. I was making dies to spin watch-case centers in, and I was using the knurls. Q. 29. Have you, or not, at any time since 1885, made any watch-case centers, or similar article, by the use of any portion of Exhibit A, or experimented in that direction? A. Yes. Q. 30. Tell us, generally, what you did. A. I am not a watch-case maker myself; so, therefore, the work done with that device is limited to experimenting on brass watch-case centers to find out results." Undoubtedly, this testimony relates to the use of Exhibit A in making the knurls by rotary motion, as testified to by Wilhelm, and it is certainly probable that the brass watch-case centers were operated on, as Wilhelm testifies, by a back and forth motion, followed by a continuous rotary motion,—the old process. All that Ecaubert says is that Exhibit A was used in making "fancy knurls" and "brass watch-case centers" by some process, and that the work done by that device was "limited to experimenting on brass watch-case centers to find out results." I find nothing in Ecaubert's testimony unmistakably relating to the practice of the present process upon the Humbert lathe; and it may be said, generally, that, taking into consideration the testimony of the remaining witnesses for Ecaubert, I am unable to find credible evidence of the reduction to practice by Ecaubert of the process in controversy in 1885. Ecaubert distinctly states that what was done after the Humbert machine was sent away was experimental, which could hardly have been the case if there had been previous reduction to practice; and, although some of the witnesses may go further than Ecaubert, yet, upon the whole testimony, I cannot accept the theory that in connection with Exhibit A. which was made to go with a continuous rotary machine, the reciprocating process was carried to the point of reduction to practice as a completed invention. The principle applicable to the kind of testimony introduced by Ecaubert is laid down in the case of Thayer v. Hart, 28 O. G. 542, as follows: "The evidence of prior invention is usually entirely within the control of the party asserting it, and, so wide is the opportunity for deception or mistake, that the authorities are almost unanimous in holding that it must be established by proof clear, positive, and unequivocal. Nothing must be left to speculation or conjecture." Syllabus.

The only remaining question is whether reasonable diligence is proved on the part of Ecaubert, in reducing his process to practice. Reasonable diligence is established by satisfactory proof of affirmative action, and, within limits, by excuses for inaction. No attempt is made to prove affirmative action on the part of Ecaubert between 1885 and 1888, when he applied for a patent. The passage quoted herein from the testimony of Wilhelm (see answer to question 19) shows that what was done on Exhibit A after the lathe went to Humbert was "probably four years ago." His testimony was given in 1889, so that the barley-corn knurls were ornamented by Exhibit A in 1885. Besides, as has been seen, the process in controversy was not practiced in ornamenting the knurls. No attempt was made even to enlist the favorable interest of watch-case makers in the invention, although, at the same time, Ecaubert was endeavoring to have them adopt the spinning process. Nor are his excuses sufficient, in view of his continued inaction. He was not poor, his situation was favorable, and his opportunities were, almost literally speaking, daily. He obtained six patents between 1879 and 1887,—some of them relating to improvements in ornamenting watch-case centers,—and it is probable that he would have patented the present invention if he had perfected it. The excuse that prior to 1885 he had no knurling quadrant which would prevent the knurl from slipping sidewise must be held to be unavailing, in view of the fact that the quadrant made in 1885 was taken apart in the same year only to be reorganized in the year 1889. in connection with the taking of the testimony. The excuse that there was no known, satisfactory process of preventing the discoloration of the work resulting from the action of fire in the joining of the backs and caps indicates

rather that he did not think it worth while to patent the invention than that there was any uncontrollable obstacle in the way. Besides, this objection was equally applicable to the spinning process and to all mechanical processes, yet it did not prevent Ecaubert from displaying considerable, not to say great, energy in perfecting the spinning process, and in obtaining protection therefor. In Agawam Co. v. Jordan, 7 Wall. 583, the supreme court laid down the settled rule of law, stating that rule as follows: "The settled rule of law is that whoever first perfects a machine is entitled to the patent, and is the real inventor, although others may have previously had the idea, and made some experiments towards putting it in practice." To this settled rule a single exception is recognized, to wit, that, if the one first to conceive the invention was at the time using reasonable diligence in adapting and perfecting the same, he is to be recognized as the first inventor, although the second to conceive may have been the first to reduce to practice. Reed v. Cutter, 1 Story, 590, Fed. Cas. No. 11,645.

For reasons already given, I cannot find that Ecaubert first perfected the machine or the process, so as to come within the rule, or that he used reasonable diligence in adapting and perfecting the invention, so as to come within the exception. At the time when Hofmann entered the field, Ecaubert was not using reasonable diligence in adapting and perfecting his invention; but the indifference towards it which he had manifested for a long period prior thereto continued, so far as the record discloses, down to a period subsequent to the time when Hofmann had completed his machine, and applied for a patent. Effort is made to show that Hofmann derived his knowledge of the invention from Ecaubert. The burden is heavily upon Ecaubert to prove that such was the case. Hofmann denies that Ecaubert at any time spoke to him of any way of ornamenting the centers, except by the spinning process, and his denial is coextensive with the allegation. Hofmann also insists that it was knowledge of what he had done and was doing that prompted Ecaubert to apply for a patent. If Ecaubert had obtained such knowledge, it would certainly explain why sudden action supervened upon years of inaction, delay, and indifference; but, in the view which I have taken of the case, it is not necessary to determine whether Ecaubert's applying for a patent when he did may not be otherwise explained. The decision of the examiners in chief is reversed, and adjudication of priority must be made in favor of Hofmann.

M. B. Philipp and Melville Church, for complainants.
Francis Forbes, for defendant.

COXE, District Judge. The question presented by this controversy is whether Frederic Ecaubert or Adolph W. Hofmann was the first to invent and perfect a method of ornamenting the peripheries of watch-case centers by holding the surface of an embossing die in contact with the surface to be ornamented, imparting a reciprocating motion to one of said surfaces, and at the same time moving laterally the point of contact of the die with the surface being ornamented. This question was argued, upon substantially the same facts, before Commissioner Mitchell, on an appeal from the examiners in chief, in interference proceedings, and a decision was reached in favor of Hofmann. That decision is reported in 52 O. G. 2107 (issue of September 30, 1890). It contains a statement of the salient points of the testimony, and is such a clear and full exposition of the facts and the law that additional statement is unnecessary. I do not think this decision is res judicata, but it is certainly entitled to great weight. Wire Co. v. Stevenson, 11 Fed. 155; Shuter v. Davis, 16 Fed. 564; Swift v. Jenks, 19 Fed. 641; Box Co. v. Rogers, 32 Fed. 695; Smith v. Halkyard, 16 Fed. 414; Butterworth v. Hoe, 112 U. S. 50, 5 Sup. Ct. 25; Morgan v. Daniels, 153 U. S. 120, 14 Sup. Ct. 772.

The commissioner finds that if Ecaubert conceived of the invention prior to December, 1887, he certainly did not reduce it to practice; that at the time Hofmann made his operative machine the whole matter was in a nebulous and experimental state, so far as Ecaubert was concerned. I see no reason to disagree with these conclusions. Though a commissioner's decision is entitled to respect and consideration in every controversy, particularly is this so when, as in the present cause, it comes from a lawyer of conceded ability, fairness and diligence. After giving considerable time to the consideration of the questions involved, I cannot resist the conclusion that the controversy was properly disposed of in the patent office, and that nothing has been presented since which will justify the court in setting aside the judgment then pronounced. The same argument which convinced the supreme court in the Telephone Cases (8 Sup. Ct. 778) seems equally persuasive here. Can it be that Ecaubert, familiar with patents as he undoubtedly was, if he had made an invention of conceded importance in 1879, or in 1885, would have remained inactive and taken no steps to secure the fruits of his genius for eight or even for two years? His excuses for this supineness are wholly inadequate, especially in view of the fact that during this period he took out several patents for comparatively trivial improvements in the same art. But, if it be conceded that the idea of the invention was clearly defined in his own mind, he certainly failed to embody it in a perfected machine. Hofmann was the first to do this. He made a simple but successful machine, and used it almost immediately in ornamenting centers for practical business purposes. With this issue of priority determined in favor of Hofmann there is nothing patentable left in the Ecaubert patent.

It follows that the complainants are entitled to the relief demanded in the bill.

ECAUBERT v. APPLETON et al.

(Circuit Court, S. D. New York. April 19, 1894.)

This was a suit by Frederic Ecaubert against Daniel Fuller Appleton and others for infringement of the patent to complainant, No. 434,539, brought after the commencement of a suit against him by defendants herein to cancel said patent (62 Fed. 742). The two causes were heard together. Complainant moved to strike out certain testimony taken by defendants.

COXE, District Judge. The foregoing considerations dispose of this cause also, which is an ordinary action of infringement. The bill is dismissed.

Note: As these causes have been decided upon the broad ground that Ecaubert conceived of the invention before December, 1887, he had not succeeded in reducing it to practice until after Hofmann had made an operative machine, it seems unnecessary to pass, seriatim, upon the questions raised by the motions to strike out. In view of the fact that the actions were, practically, tried together, all the testimony complained of seems to have a bearing upon some of the issues presented. I am of the opinion that the testimony should not be stricken out, and this ruling may be put in any form which counsel for Ecaubert may suggest to enable him to present the questions on appeal.