Syllabus.

HENRY CARTER AND JAMES REES, APPELLANTS,

vs.

HENRY CARTER, ASSIGNEE OF ISAAC STEER,

vs.

JOSEPH HAIGH, ANDREW HARTUPEE, AND JOHN MORROW, ASSIGNEES OF WILLIAM KENYON, APPELLEES. INTERFERENCE.

HENRY CARTER, ASSIGNEE OF ISAAC STEER, APPELLANT,

vs.

HENRY CARTER AND JAMES REES,

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JOSEPH HAIGH, ANDREW HARTUPEE, AND JOHN MORROW, ASSIGNEES OF WILLIAM KENYON, APPELLEES. INTERFERENCE. (TWO CASES.)

APPEAL—WHEN WILL LIE.—An appeal will lie to the judge from the decision of the Commissioner refusing a patent to all of the applicants involved in an interference although he did not award priority to either. The appeal is from the refusal to grant the patent.

LIMIT OF APPEAL.—When the Commissioner has fixed no time within which the party may appeal, an appeal may be taken at any time.

NEW TRIAL—DEPOSITIONS.—In a rehearing or new trial of an interference the depositions taken on the first trial may be used.

SM—SM—NEW PARTY—NOT A NEW CASE.—When a new party is included in such rehearing or new trial of an interference it does not become a new case within the spirit of the rule excluding depositions taken in another case not between the same parties. Following the chancery rather than the common-law practice, the new party applicant comes in subject to the depositions already taken; and as between the original parties there is no lack of *mutuality*, since the parties and the subject-matter are the same.

WITNESSES—EXAMINED LONG AFTER THE EVENT—CREDIT TO BE GIVEN TO.—Under any circumstances, a great lapse of time, which has taken place before the witnesses are called upon to state the facts relating to a case where a nice point of invention is to be established, must in the nature of things make it very difficult to get at the real facts in the case, unless they were reduced to writing at the time.

WITNESSES EXAMINED ON NEW TRIAL.—When witnesses have been once examined upon the facts in the case, and then upon a new trial endeavor to supplement the deficiency of their former testimony, as pointed out in the decision, their testimony should be received with great caution, and particularly where the occurrences to which they testify were twenty years old, and involved a nice point of invention.

SAME.—Exhibiting to witnesses the opinion in the former case is calculated to lead their minds to the further proof necessary in the case; and in its fairest aspect this proceeding would be as great, if not more objectionable, than leading questions would be, answers to which are inadmissible in evidence.

SAME—INCONSISTENCIES AND DISCREPANCIES IN TESTIMONY—EFFECT OF.—When there are deliberate inconsistencies and discrepancies in a witness' testimony in material matters, proceeding from design, no credit can be given to the same, in accordance with the rule *falsus in uno falsus in omnibus*. When such inconsistencies arise from ignorance or a careless inadvertence, all confidence in the truth of his testimony must still be lost.

(Before MORSELL, J., District of Columbia, June, 1855.)

STATEMENT OF THE CASE.

Carter and Rees' application for reissue. The original patent was granted August 26th, 1851, No. 8322. The reissue application became subsequently reissue patent No. 313, June 19th, 1855.

Haigh, Hartupee, and Morrow, assignees of John Kenyon, application for reissue. Original patent was granted to William Kenyon, assignor to Joseph P. Haigh, Andrew Hartupee, and Joseph Morrow, No. 8427, October 14th, 1851.

Henry Carter, assignee of Isaac H. Steer. Application for a patent, which subsequently became patent No. 13,118, June 19th, 1855. (For diagram, see Patent Office Reports, 1855, vol. 2, p. 51 of illustrations.)

MORSELL, J.

Carter and Rees, in stating their claim in their specification, say: "We are aware that Isaac H. Steers, on about the year 1840, proposed to make nuts by the process we have here described, but never completed a machine which would do this automatically; therefore we do not claim the process in itself and irrespective of machinery; but being the first to construct a machine capable of

making nuts by this process, without any other or further manipulation than is required for feeding in the bar of iron, we claim as our invention, and desire to secure by letters-patent, the machine substantially as herein described for making nuts, by cutting the blank from a heated bar of iron, punching its eye in a closed die-box, pressing it into shape while in the die-box and on the punch, and then discharging it as specified."

In describing the operation of compression, they say: "The punching and compressing of the blank is effected as above described while the latter is within the die-box. It is therefore supported at its sides by the sides of the die-box, which prevent the enlargement or straining of the nut under the action of the eye-punch, and is compressed between the cutting and counter-dies while the nut is on the eye-punch and within the die-box."

According to the principles of the specification, they produced their model before the Commissioner in this case; and the Commissioner, in assigning the reasons for the conclusion to which he came, says: "William Kenyon, the inventor, is also introduced as a witness, who states that the principle upon which his machine operates was precisely like that of the machine now sought to be patented by the present contestants. He refers also to the model marked 'D,' which he says operated in the same way as his original machine." The Commissioner then says: "The working of this model is in accordance with the claims now placed in interference [meaning model 'D']; so that if this testimony is to be credited, the case is fully made out."

From which it is to be inferred, in favor of said Carter and Rees, that the patentability of their invention, as shown by the said model, was admitted as showing the true invention. Their application was filed on the 14th of March, 1854, stating that they had obtained letters-patent for improvements in machines for forming the nuts for bolts and other articles of similar form, which letters-patent were dated on the 26th of August, 1851 (No. 8322); that they then believed the same were inoperative and invalid, by reason of a defective specification, which defect had arisen from inadvertence and mistake; they therefore desired and offered to surrender the same, and prayed new letters to be granted, according to the aforesaid amended specification.

The appellees say: "What is claimed as the invention of Will-

iam Kenyon, and is desired to be secured by letters-patent, is cutting a nut or washer from a heated bar, punching a hole therein for the screw, and compressing the said nut or washer into the desired shape at a single operation; also the compressing and discharging the nut or washer by means of the follower or hollow piston, the bracket, the cross-head, and the moving die-box, constructed and operating substantially as described."

The principle and mode of operation of the machine is particularly described. It will only be necessary, however, here to state the latter part of it: "The mandrel *P*, being prevented from receding by the bracket *Q*, prevents the bar from tilting, whilst the die as it advances cuts off the end of the bar; as the shoving-head advances further by the turning of the shaft *B* it strikes against the bracket *Q*, and causes the said bracket to carry forward the mandrel *P* against the nut in the die *M* with such force as to give it the desired shape, by pressing the nut into the die and causing it to conform to the shape of the cavity therein. By the time that the shoving-head is half way on its stroke and the bar is half cut through, the heel of the interior cam *H* urges the round-punch forward through the nut, and returns with a quick motion, to prevent its exposure to the action of the heat of the nut, cuts a round bur out of its centre, forming a circular hole for the screw, and deposits the bur in the hole *U* in the centre of the square punch *T*." This application was filed the 10th of August, 1853. They also state that as assignees of William Kenyon they did obtain letters-patent for a new and improved machine for cutting and perforating iron nuts and washers at one operation, which letters-patent were dated the 14th day of October, 1851 (No. 8427); that they believed the same was inoperative and invalid, by reason of a defective specification, &c. They therefore prayed that they might be allowed to surrender the same and amend, and that letters might be granted according to the aforegoing specification.

The claim of Carter, assignee of Steer, appears from the specification to be—first, making a nut at a single operation from a heated bar or plate of metal, by cutting off the blank from the bar, punching a hole or eye through it, and swaging it into shape, substantially as set forth in the specification; second, punching the eye of the nut in a die or press-box, by which it is

surrounded and firmly supported, and thus prevented from straining or bursting during the operation, substantially as set forth; third, shaping nuts by subjecting them, while hot, to powerful and sudden compression on the punch and in the punching-die, substantially as therein set forth, whereby they are finished with such a degree of smoothness and regularity and precision that they are fit to use in the construction of most kinds of machinery, and are sounder and stronger than unpressed nuts made by machinery. This appears to be dated 13th August, 1852. In the original proceeding there were other parties and claims; but none are now before me other than those I have stated; on the issues and evidence in which cases the Commissioner, on the 21st of October, 1854, decided priority of invention, and awarded the same to Kenyon, assignor of Haigh, Hartupee, and Morrow, and limited the appeal to the fourth Monday of November then next.

In the reasons for his opinion he states, in substance, that the subject-matter of the then interference was before the Office in February then last, when it was held that the proof as then presented did not show either of the contestants to have been the first inventor of that which they claimed; that Carter and Rees have since become parties, new testimony has been taken, and a new investigation became necessary; that by special agreement a portion of the testimony taken in the former case had been transferred to this. As far as that agreement extends, such testimony would be received and considered; but beyond that, no regard would be paid to the testimony filed in the previous case for any purpose whatever; that the invention then in interference was the making of nuts of hot iron by the several contestants in the manner severally described by them; that it does not consist in the mere making and punching the nuts, but in compressing them into shape and punching them while so compressed. The person who first conceived the idea of doing this, and contrived the means of giving effect to that idea, should be deemed the prior inventor.

That Kenyon claimed to have done this in 1835. If he really did this, there will be no further cause of controversy, as none of the competitors attempt to fix a date so early by several years. On the previous trial it was held that though Kenyon doubtless had at that time contrived some sort of a machine for making

nuts or washers, there was no sufficient evidence that it either did or was intended to work upon the principle we have above stated. The Commissioner asks: "Has the defect in the testimony been now remedied?" He then proceeds to review the testimony, which consisted principally of a re-examination on the part of the appellants of the same witnesses, and on the same subjects as on the former occasion, and says if this testimony is to be credited the case is fully made out; that he should have no hesitation in coming to such conclusion but for the cross-examination of P. H. Watson detailing the statements of Bradbury, when called upon by the counsel for the assignees of Kenyon for the statements of Bradbury. The witness says, among other things: "He stated that if he should testify, his evidence would be fatal to Kenyon's claim as the inventor of the machine. He said, also, that Kenyon never invented a machine that would make nuts."

The Commissioner considers these statements as evidence in the case, and as such must have their weight, but thought that there were circumstances in the case which impaired their weight, and says: "Upon a general view of all the testimony in this case, I am induced (though with some hesitation) to come to the conclusion that Kenyon had really in 1835 or 1836 made the invention for which he is now an applicant for a patent, and that he is therefore the first inventor thereof."

As an appeal is supposed to be taken from the first decision of the Commissioner on the subject of this case (alluded to by him in the aforegoing opinion) on the 6th of February, 1854, it may be proper to notice the grounds of that opinion. The subject-matter of the interference and decision was the same. The Commissioner distinguishes between what is a requisite degree of compression to sustain an invention for making and punching nuts of considerable thickness before the punch is withdrawn, in order that they may be swaged into uniform shape and regular thickness, having the hole perpendicular to the upper and lower faces of the nut, as in the present application, and the case where thin pieces of metal are to be perforated, when nothing of the kind is necessary.

He further says: "But the proof does not satisfy me that Kenyon ever invented the subject-matter of the present interference;" and he proceeds to state the particular deficiencies. As to that

of Cochrane's, he says: "He does not seem to have a clear conception of the chief point of the invention, as he states that he cannot say whether they were pressed before or after they were punched." So, as to Kenyon, he says: "Even Kenyon himself does not set forth the working of his machine in such a way as to show that it effected the objects aimed at in the patents now applied for; that is to say, punching the nuts while under pressure, or an equivalent thereof." It is true that Cochrane and Kenyon both state that the machine invented by the latter was like that produced in evidence; but this is a very loose way of describing a machine in a case where a nice point is sought to be established. So with respect to Vivian's testimony. He says "that witness says this [the model produced as Kenyon's on that examination] was very unlike that brought to him in 1850 by Kenyon and Hartupee as Kenyon's invention, and from which he made drawings, and would necessarily, therefore, have noticed the peculiarities of the machine." The Commissioner notices, also, the laches and neglect on the part of Kenyon in applying for a patent, being nearly twenty years from the time he dates his invention, and his carelessness in suffering it to be thrown about and at length destroyed, instead of putting it into practical use. He says: "It is not unreasonable to presume that but for the discoveries of others this machine would never again have been heard from." Finally, he says that Kenyon was proved to have visited and inspected the nut machine in operation in Carter and Rees' shop. There is no doubt that he saw and examined the machine. And it is shown by disinterested testimony that he had more difficulty in understanding its operation than would be likely to be felt by one who had invented substantially the same thing. Up to that time his machine had never been used for this purpose. "I feel bound, therefore, to conclude that Kenyon derived his first knowledge of the true nut machine from the machine which he saw in Carter and Rees' establishment, and which is shown by Barret's testimony possessed the properties described in the claim now placed in interference."

The Commissioner then proceeds to consider the pretensions of Steer to the invention; says that it is admitted that he had a machine in operation in 1841 on which he made nuts from heated iron; but nothing would warrant the conclusion that he ever enter-

tained the idea which is at the bottom of this invention. The mere punching of a hole through a nut is not that idea. The punching of that hole while the nut is inclosed in the die-box does not reach the point. The nut must be compressed, either at the moment of being punched or after it is so punched, and before the punch is withdrawn, in order to reach the point of patentability; and, as before intimated, the Commissioner concludes this opinion by saying: "The only decision, therefore, which can now be made is to deny a patent to either, which is accordingly done."

The appellees object that the judge has no jurisdiction to hear an appeal from this last-mentioned decision, because the law allows an appeal only in the case where the Commissioner decides which of the applicants is the prior inventor; and the Commissioner has not awarded priority to either, and does not decide the question at all as between the parties. That may be true; but he does deny a patent to either; and it is from the decision that refuses to grant the patent to him as applied for that the law allows the appeal. And as no time was limited within which he was to take his appeal, no sufficient reason, it is supposed, existed against the right; but if this were not so, it will be hereafter shown that, notwithstanding the fact of another party's being added, that does not so change its nature as to make it entirely a new case; and the subsequent proceedings show it to be a rehearing or new trial as to the original parties, as well as the issues in which the new applicant is to be considered a party. The cases, therefore, will be considered together.

The first and second reasons for the appeal in the first case are general—for having refused the patent to the appellants and for granting it to the appellees. The third and fourth for error in the effect given to the testimony of the witness Cochrane. The fifth because of error in the speculative views of the Commissioner as to the practical working of iron in the manufacture of nuts, and the value of the appearance of the products of a nut machine as a test of the *modus operandi* of said machine. The sixth and seventh are as to the effect given to Daft's testimony, and that of William Kenyon. The eighth for refusing to permit the appellants to use the depositions of Kenyon, Corcoran, and Daft, taken by and on behalf of William Kenyon, assignees on

the former trial, and given in evidence on said trial by said assignees before the Commissioner, and now remaining on the files in said case, for the purpose of showing variances and discrepancies between them and the depositions of said witnesses taken and used in the present trial by said appellants on the same subject-matter.

In the other case the first is a general reason for denying a patent, &c. The second is that Steer's machine, whch was constructed in 1841, would allow of no compression of the nut while on the eye punch, and that the original invention did not contemplate such compression. Third. By deciding that the eye punch in Steer's machine of 1841 was made largest at the outer end, according to one of the forms suggested in his specification filed in the Patent Office in that year, and that if the nut were compressed around the punch thus formed it could not have been removed. The others are in substance the same with those in the first case.

The first reason which will be considered is the eighth, upon the subject of the refusal to permit the first set of depositions to be used in evidence by the appellants for the purpose therein stated. I pursue this course because it will be then ascertained what evidence is or is not deemed to be in the case; as to which refusal the Commissioner says: "By special agreement a portion of the testimony taken in the former case has been transferred to this. As far as that agreement extends, such testimony will be received and considered; but beyond that, no regard will now be paid to the testimony filed in the previous case for any purpose whatsoever." The Commissioner assigns no reason for the refusal, but the counsel for the appellees protested against the right to use the testimony taken in the former case to discredit the witnesses on that trial because—first, that inasmuch as the first interference case was declared between different parties, different questions might arise. When the testimony referred to was taken, Carter and Rees had not made their application. Steer's implement for making nuts was very different from the machine of Carter and Rees, and therefore a different kind and degree of testimony and proof was requisite in the two cases. Second. Haigh, Hartupee, and Morrow, assignees of Kenyon, did not know, until the opinion given, the ground on which the

interference was supposed by the Commissioner to consist, and therefore did not fully examine the witnesses on the first occasion. It would be wrong, therefore, to endeavor to force testimony into the present case which had not been taken for that purpose. Third. If apparent discrepancies exist in the testimony of the same witnesses in the two cases they could have been satisfactorily explained if due notice had been given. "They ought to have pointed out to the witnesses on the cross-examination the supposed discrepancies. To ascertain the correct principles on this point, it may be proper to advert briefly to the historical facts pertaining to this particular matter. The subject-matter or invention on both trials was precisely the same. The original interferences declared were between Carter, assignee of Steer, and Haigh, Hartupee, and Morrow, assignees of Kenyon, David Howell, and Lauriston Town. The specifications were the same. The testimony or depositions of these same witnesses were again taken by the appellees, and used by them on the trial of the issues in this case, with additions to them. The only material difference since the first trial and opinion as to the parties and subject-matter worthy of notice was a new application by Carter and Rees for their invention, and a further interference declared in consequence thereof.

The opinion, as has been already stated, was given in February, 1854, which was "that neither of the parties were entitled to a patent for the reasons stated. At that stage of the cause an application was made by counsel on behalf of the appellees for a reconsideration of the decision, and a learned argument was addressed to the Commissioner, dated the 16th May, 1854, on the subject; in concluding which argument he says: "Finally, we hope the Commissioner will reconsider the matter, either upon the testimony already taken and the question of law arising on them, or upon further testimony to be taken, when we have no doubt of showing from himself that Mr. Vivian's statement was certainly misunderstood." Shortly after this, leave was given to said original parties and to the said Carter and Rees to take testimony for the purpose of being used, as stated in the notices of this reissue or new trial before the Commissioner, on the day stated in said notices, under which authority the present depositions of Cochrane, Daft, Kenyon, Vivian, and others were re-

examined on the same points, and the additions to their depositions made, on which examination cross-interrogatories were propounded suited to call their attention to what they had stated in their original depositions, and to the variances between those and the present; and furthermore, notice was subsequently given by the appellants to the appellees of their intention to use said depositions for said purpose on this trial. If this trial could have been confined to the original parties only, according to well-settled principles of law, I suppose no doubt could have been entertained that the appellants would have been permitted to use the old depositions for the purposes they wished to use them for on this occasion. What difference, then, does the coming in of the new parties make in the principle?

The general rule certainly is, that where the parties are not the same, either identical or in privity, the evidence is not admissible, because there is no mutuality, and the new parties would not have had an opportunity of cross-examination. But from the nature of this peculiar proceeding, where new parties, applicants for the same invention, may be allowed to come in and have a proceeding adapted to the new condition of things, the rule of evidence which will be applicable resembles more a proceeding in chancery than otherwise. He will be received only on the terms of being subject to the testimony which either of the parties have previously taken in the case. To which effect the rule is laid down in 1 Greenleaf's Evidence, section 553: "We have seen that in regard to the admissibility of a former judgment in evidence, it is generally necessary that there be a perfect mutuality between the parties, neither being concluded unless both are alike bound. But" [speaking of a proceeding in chancery] "with respect to depositions, though this rule is admitted in its general principle, yet it is applied with more latitude of discretion, and complete mutuality or identity is not required. It is generally deemed sufficient if the matters in issue were the same in both cases, and the party against whom the deposition is offered had full power to cross-examine the witness." I think, therefore, the appellants ought to have been permitted to use the said depositions in the trial of said issue, and that they may be considered as a part of the evidence now to be acted upon.

My purpose is next to consider the reasons relating to the effect

of the testimony as it tends to support the issue on the part of the appellees.

The Commissioner gives a description of the invention of which that issue is formed, by saying that it consists of "the punching of holes in nuts of hot iron of considerable thickness, while their sides are sustained laterally by the corresponding sides of a die-box, and also while they are firmly compressed above and below, (or at least such compression should be exerted upon them before the punch is withdrawn,) in order that they may be swaged into uniform shape and regular thickness, having the hole perpendicular to the upper and lower faces of the nut;" that it is a nice point sought to be established, and should be satisfactorily made out by the proof. He states, also, certain tests in the attainment thereof; that "the mere punching of the hole through a nut is not that idea; the punching of that hole while the nut is inclosed in a die-box does not reach the point; the nut must be compressed either at the moment of being punched or after it is so punched, and before the punch is withdrawn, in order to reach the point of patentability," as before stated. This, then, is the standard which the proof must show the first and original invention to have arrived at or been matured by him.

The Commissioner's view and reflections, as expressed in his first opinion, on the effect of the proof on the part of the appellees, are, I think, perfectly correct and just, and such as I shall adopt. On that occasion the proof did not satisfy him that Kenyon ever invented the subject-matter of the then interference, and which interference, so far as it respects that matter, is now the same. The question, then, as stated by himself, is, "Have the objections which then existed been removed by the additional testimony?" The question, however, is not as he considered it, with the exclusion of the testimony originally taken, but I think in connection with it.

Under any circumstances, the great lapse of time—almost twenty years—which had taken place before the witnesses were called on to state the facts relating to a case where so nice a point is sought to be established, must, in the nature of things, make it very difficult to get at the real truth of the facts as they existed, unless where reduced to writing, and much more so under the circumstances existing at the time when and for the purpose this re-

examination was made. That testimony was obtained from the same witnesses, on the same subject, after an apparent full previous examination, with the assistance of very able counsel, and after the decision by the Commissioner stating particularly the points in which the former proof was deemed by him deficient, and particularly what it was thought certain features in the invention still required proof of, which opinion was made known to one, if not more, of the witnesses by the assignees before or on their re-examination—can it be doubted that this was calculated unduly to lead the minds of the witnesses to the further proof which the party wished them to make? Under the fairest aspect under which it can be looked at, it would be surely quite, if not more objectionable than would be leading interrogatories, answers to which, according to the settled principles of evidence, would be inadmissible in evidence. What may have been the full extent of its influence on this occasion it is not for me to determine. There certainly are strange and unaccountable inconsistencies and discrepancies between their testimony on the former occasion and that on this. I wish to be understood as not intending to impute any intentional misconduct to any one.

To begin with Mr. Vivian: He says that in 1850 Kenyon and Hartupee brought to him a model, (which it is presumed was that of Kenyon's invention,) from which he made drawings (and would probably note the peculiarities of the machine). This, he says, was very unlike that produced in evidence, both in its principle and combinations. On his examination for the present occasion, in his answer to an interrogatory put on the part of the appellants' counsel—whether he was asked to correct his testimony to meet the objections of the Commissioner, having before stated that the opinion had been shown to him by Haigh—he said: "I was not asked to do so; but on reading the opinion of the Commissioner, and finding that on my previous testimony no question had been asked on the question of pressure of the nut, or its being sustained laterally in the die-box during the operation of punching, I was prepared at the next examination to give testimony on those particulars."

Corcoran's testimony seems to be relied on by the Commissioner as unquestionably true in his statements respecting Kenyon's machine of 1836. In the operation of compressing the nuts,

(being a fact, as he says, in regard to which he would be less likely to be mistaken than he was in relation to the principle upon which the two machines operated,) the witness says the actual compression would be a tangible fact, evinced by the appearance of the nut itself. Let his testimony about other facts equally tangible be examined, and by comparison of himself with himself it will be found that this is a mistaken confidence. On the former examination he described the nuts to be a quarter of an inch in thickness; since which time the Commissioner in his opinion has said the nuts must be of considerable thickness. On his last examination, as if to meet this objection, he says the nuts were three-quarters of an inch thick. On his first examination he stated the machine to be three feet high; on the next, two feet four inches; on the first, two feet wide; on this, three feet six inches; on the first, four feet long; on the second, four and a half feet long; on the first, that Kenyon said he was going to try the hot iron; on the second, he said that he saw iron nuts three-quarters by a quarter, which Kenyon told him he had made by the machine; but Kenyon swears he never made an iron nut, nor had any experience in making hot-pressed nuts by machinery. With respect to the arrangement and order of operation of the machine on the former occasion, he said the bar was forced into the die by the square punch. In his last examination he says that the box moved up by a stroke of the cam towards the stationary punch, cut off the bar, and pressed it into the box; while pressed, the round punch moved up. In his first examination he cannot say whether the nut was pressed before or after the hole was punched. In his last he says they were pressed before and at the time they were punched; and there are still several other inconsistencies and discrepancies in material matters. What, then, is the rule of law which ought to be applied? If it has been from design, then the rule is *falsus in uno, falsus in omnibus;* if from ignorance or a careless inadvertence, still all confidence in the truth of what he has said must be lost.

Next, as to Kenyon's testimony. The Commissioner, in the remarks contained in his first opinion on this part of the testimony, says Kenyon himself does not set forth the working of his machine in such a way as to show that it effected the objects

aimed at in the patents now applied for; that is to say, punching the nuts while under pressure, or an equivalent thereof. In alluding to the model "D," then before him, and deemed insufficient as respected the order of its operation, he says: "But even if intended to work in the precise manner required for the purposes of this case, it is by no means certain that Kenyon's machine was like it in this particular." On this examination Kenyon says that the model "D" (Reinhart) was exactly like his machine of 1835, except in size; also that there was a difference in the course of the operation between the round punch of the model there identified and the one at Washington, but that it operates for the same purpose for both, and was intended to do the same kind of work. This difference in the order of the operations having been considered essentially defective, on the examinations for the present issue, to supply the defects, Kenyon testifies, in substance, that the machine of 1835, in its order of operation of the round punch and other operative parts, was the same as the model at Washington, upon which the application is based; that the combination of dies, punches, and swedges are just alike in the mode of operation, by which it is supposed he intended to convey the idea that the order and course of operation were the same. If so, it is very apparent that he has contradicted himself in a very material point. Again, if the description he has given of the size of his machine be correct, can it be true, as he has stated, that he made the nuts of the stated thickness and breadth by operating the machine himself, and without any assistance? It was utterly impossible. The same rule of law laid down as applicable to the testimony of Corcoran must apply to this. Again, Richardson, who was applied to by Kenyon in the spring of 1845 to make drawings for him of his machine, says, as it respects the operation, that the nut was in the first place cut off, then pressed, and then punched—the pressing and punching being two distinct operations. In this, also, there is a material difference. Kenyon says it was all done by one operation.

The testimony of Bradbury, although it might be considered somewhat lessened in its credit by the circumstance stated by the Commissioner, cannot be said to be without some measure of weight. He said that his evidence would be fatal to Kenyon's claim as the inventor of the machine; that Kenyon never invented

a machine that would make nuts. This witness had the most ample opportunity of knowing.

Daft, on his first examination, says he does not remember whether or not the nuts were pressed in a closed die box, nor can he say whether they were pressed before or after they were punched; and though he had some of the nuts in his hand, he could not tell of what kind of metal they were made. He thought at the time they were of iron. On his second examination he says the operation was in his presence; and he is then brought to say it formed iron nuts and pressed them, and they appeared to be smooth. He betrays too much ignorance and inconsistency to entitle his testimony to much weight.

There is proof in the case that Kenyon visited the shop of Carter and Rees in August, 1850, to examine their nut machine, on which occasion, in the course of half an hour or more, at his request, explanations were made to him how Carter and Rees' machine worked. He was shown the die box, how the nut was pressed and punched, and how it was discharged. He could not understand how the bottom die worked on the punch, &c. He on that occasion does not say or pretend that he had ever invented a machine substantially on the same principles. On the contrary, advises the application for a patent at once. Let this be connected with what Kenyon himself admits, that he never made or tried to make hot nuts on his machine previous to seeing that of Carter and Rees' machines, and also with the absence of sufficient proof on the part of the appellees to show satisfactorily that the machine of 1835 or 1836 possessed in the course and order of its operations those essential features of the invention, as before stated in the opinion of the Commissioner to be necessary. With the Commissioner, I feel myself bound to conclude that Kenyon derived his first knowledge of the true nut machine, now the subject of interference, from the machine which he saw in Carter and Rees' establishment; and upon the whole, that he was not the original inventor, as claimed on the present issue; and that the priority of invention ought not to have been so awarded. I will next consider the case of Carter, assignee of Steer. The reasons of appeal are the same with those in the case just considered, except the first three. The only special ones are the second and third. The second relates to the compression of the nut while on the eye

punch, which the Commissioner decided Steer's invention did not contemplate. The third is intended to cover his objection that the eye punch was made largest at the outer end. With respect to the description of the eye punch being largest at the outer end, as stated in the original specification, and intended thereby only to show one of the forms in which the invention might be executed, this is omitted in the present specification, nor does it appear to have been adopted in the model filed in the Office. It is therefore unnecessary to decide whether the inference drawn by the Commissioner from that circumstance was correct or not.

I have with great care examined the model just alluded to—on one occasion with a very skillful expert, mutually agreed on by the parties, and in their presence and alone several times subsequently—and am entirely satisfied that it possesses the important peculiar feature in the operation of the machine of effecting perfect compression of the nut whilst the punch continues in it, by an additional after-pressure, so as to weld up the fissures and obliterate the defects produced by punching the eye. But the views I have already taken will make its application to the model of the appellees before the Commissioner unnecessary. I think the following is a correct description of Steer's model: The die box was placed below with a punch in it, both stationary. The swage constituted the bottom of the box. The square punch was placed above and opposite the open side of the box. When this square punch was withdrawn, the end of the bar of heated iron was laid upon the mouth of the box; when the square punch was suddenly and forcibly thrust forward, it separated the piece of metal of which a nut was to be made, carried it into the box upon the eye punch which made the perforations, and, carrying the piece thus punched still forward against the swage or bottom of the box, powerfully compressed it between the square punch and the swage and around the eye punch, which was still in the perforation, thus giving perfect form and compression to the nut, and rewelding and compressing the parts in the eye which had been disturbed, torn, rent, and displaced. The whole is done by a single forward motion of the square punch. The swage was then thrown up, the box and eye punch remaining stationary, and the nut thereby discharged. Now, if this is sustained by the

proof, all the conditions stated in the Commissioner's opinion will have been gratified. First. It is admitted "that a machine constructed according to the plan represented in the annexed drawing marked "D" was in use by said Steer for the purpose of experiment in 1841, and that he made sound nuts of iron of uniform and symmetrical form. By means of said machine the same nuts were made champered or beveled at the edges of one side by the powerful compression to which they were subjected in the die-box; that three or more nuts were cut off a heated bar, and properly formed without reheating the bar; and that no practical difficulty was found in the operation of the machine." The drawing "D" is an exact copy, on a reduced scale, of the drawing attached to Carter's application as Steer's assignee, and is an exact copy of the drawing attached to Steer's original application in 1841, and is an exact representation of the machine described in both specifications. Secondly. In addition to this is the testimony of John Fenton, who says he had formerly been a manufacturer of woollen goods by machinery; that in 1841 Steer made a working machine, which was like the model machine deposited by said Steer in the Patent Office, and which the witness has seen there, and which remained there at the time of giving his testimony. Said model is like the said machine in all essential respects. He had frequently examined said machine. He saw it in operation in 1841. It was operated by Isaac H. Steer in person, with the assistance of Joel Lupton. He went there after the machine was constructed and in the shop, and they took some hot iron to show the witness the operation of the machine, and cut some nuts. The machine made several nuts at one heat of the bar; he can't say how many exactly. They were well made, smooth, and greatly superior to the hand-made nuts, being perfectly smooth and compressed, so much so that he carried some of them to be exhibited to the neighbors. All of the nuts were pressed into the same die and punched by the same punch, and were consequently—that is, all from the same bar of metal—exactly alike. By their general appearance and by their use (upon witness' own tools and wagons, they being in constant use) he knew that they were perfect in strength. The compression of the nut was perfect on all sides. The nuts were made as fast as a man could swing a sledge, as

every stroke of the sledge made a nut. There was no difficulty in clearing the punchings or in throwing out the nut when it was completed. If there had been, they could not have gone on with the operation. The compression of the nut took place while the punch was in the eye of the nut and while the eye was being punched. He considered it a great labor-saving machine, and so he does now, and of great utility. The nuts which he saw made on the machine in question were of the usual proportions of wagon nuts and nuts for machinery, and they were of full thickness. The top of the nut was beveled at the corners, showing the powerful operation of the punch while in the die box. The nut took precisely the reverse form of the die.

This proof appears to me to be very full and conclusive to show that in the year 1841 Steel had invented the nut machine according to all the tests stated by the Commissioner in his opinion, and that therefore his assignee, Carter, is entitled to a patent therefor as prayed. And it has also been satisfactorily proved that Carter and Rees are entitled to a patent for the improvements they have made upon Steer's machine to adapt it to working by power.

P. H. Watson, for the appellants.

IN RE MORGAN EVERSON AND DANIEL M. RICARD. APPEAL FROM REFUSAL TO GRANT PATENT.

SUFFICIENCY OF INVENTION—ACCIDENT—UTILITY OF CHANGE.—Where the utility of the change and the consequences resulting therefrom (in case of a machine) are such as to show that the inventive faculty has been exercised, though in point of fact the change was the result of accident, the requisite test of a sufficient amount of invention may exist.

SM—COLORABLE ALTERATIONS—DOUBLE USE.—Where the change consists merely in the employment of an obvious substitute, the discovery and application of which could not have involved the exercise of the inventive faculty in any considerable degree, the change will then be treated as merely an unsubstantial colorable variation, or a double use.

SM—SM—INCIDENTAL CHANGES.—Incidental changes in the arrangement of the