and its principle, and was using reasonable diligence to perfect the mechanical details, he cannot be deprived of his patents.

He did perfect his model in a reasonable time. No such delay occurred as to amount to abandonment of his right. His application to the Patent Office was previous to Marshall's. No patent in fact has yet been granted to anybody; and if he is the first original inventor, and has now reduced his invention to practice, he must prevail over any subsequent original inventor reducing it to use before him, and *a fortiori* over Mr. Marshall, not an original inventor at all, but borrowing his ideas of the improvement from Mee.

The patents for the loom and for the fabric, the fruit of the loom, must therefore be awarded to the assignees of John Mee, unless some person other than Marshall can show a better right. John Pepper asserts that the double needle-bars, working independently, was his original idea; but all the other evidence shows it to be Mee's; and Pepper has entered no caveat, nor set up any adverse claim in the Patent Office, nor alleged that he made known his invention to Mee, and he is self-concluded.

Upon the whole, therefore, I am of opinion, and do now this 20th of April, 1853, order and adjudge, that the decision of the Commissioner of Patents of the 12th of January, 1852, in favor of Mee, Rourke, and McKennon, assignees of John Mee, in the cases of improvements in the knitting-loom and knit fabric, be, and the same is hereby, affirmed.

CYRUS H. McCORMICK, APPELLANT,

vs.

RUFUS L. HOWARD, ASSIGNEE OF WILLIAM F. KETCHUM, APPELLEE. INTERFERENCE.

DEPOSITIONS TAKEN IN FORMER CASE—WHEN MAY BE USED.—Depositions taken in a former interference may be read at the trial when the subject-matter at issue in the former case was the same and the parties in interest, assignors of the entire right, were the same, so that the party against

Opinion of the court.

whom the deposition is offered has had full opportunity to cross-examine the witnesses.

SM—SM.—It would be unnecessarily oppressive to require the party, merely to gratify form, to take his testimony over again, as well as uselessly expensive.

PRINCIPLE—UNSUCCESSFUL EXPERIMENTS—REDUCTION TO PRACTICE.—A mere principle or idea, until it assumes a practical form, is not patentable; and a long course of mere fruitless experiments to reduce the principle to practice would not prevent a subsequent original inventor who had perfected his invention without knowledge of the prior invention from obtaining a patent.

REASONABLE DILIGENCE—EFFECT OF.—On the other hand, when a prior inventor has been using reasonable diligence to perfect and adapt the invention to practice, all his rights will be preserved and protected, although his success may not have been perfect.

FIRST INVENTOR—BEFORE ALL OTHERS.—The expression in our statute means that the patentee must have been the inventor first in point of time before all others.

ESTOPPEL—FAILURE TO APPLY.—The fact that an alleged inventor neglected to apply for a patent, although he knew that other persons had filed applications for the same invention, brings him within the reason of the rule that when a man has been silent when in conscience he ought to have spoken he will be debarred from speaking when conscience requires him to be silent.

(Before MORSELL, J., District of Columbia, May, 1853.)

MORSELL, J.

The application was made on the 7th of November, 1851. In his specification the applicant states the improvement more particularly to be for combining with the cutting apparatus at its left-hand end a slide or raking-board, forming with said cutting apparatus an angle less than a right angle, by means of which the cut grass is drawn outwards from the standing grass, by which a pathway is obtained between the standing and cut grass for the driving-wheel to pass on the ground on the return trip of the machine, as well as to prevent the cut grass from getting on the fingers, and thereby clogging the sickle. His claim is for combining with the cutting apparatus a raking-board, forming with the said cutting apparatus an angle less than a right angle, substantially as and for the purpose specified. According to the statement of the Commissioner, there were at the time pending applications before him for patents for the same invention, one by

Henry Green, made in the month of August, 1851, and another on the part of Rufus L. Howard, appellee, as assignee of George Sheffer, made in the month of October in the same year. An interference was declared between the parties, and the 13th of May, 1852, was appointed for the day of hearing. On the 10th of January, 1850, the above-named William F. Ketchum assigned to Rufus L. Howard all the improvements he might thereafter make to his mowing-machine, which assignment referred back to the original deed for its consideration. This assignment was not recorded within three months, and he gave another assignment, dated February 7th, 1852, to renew the same whilst the issue was still depending between the said original parties. On February 7th, 1852, after notice given to H. Green, George Sheffer, and Rufus L. Howard, Cyrus McCormick took his testimony in the case and had the same forwarded to the Patent Office.

On the 27th of February, 1852, the said Ketchum, assignor to the said Rufus L. Howard, filed his petition and specification for a patent for an invention which the Commissioner states to be the same as that claimed by McCormick in his specification. He states that his object is to clear the track by removing the cut grass from the standing stubble—turning it out of the way; that he has experimented several years with contrivances essentially the same; that the contrivance he then had in use operates with perfect satisfaction. This consists of a raking-board combined with the rack-piece by a joint or hinge, at an angle less than a right angle. The scraper or raking-board, as it trails along on the ground after and in the wake of the cutters, has the effect to remove the cut grass from the standing stubble by rolling and turning it in towards the machine, out of the way, leaving a clear track for the heel of the rack-piece to move in on the return swath. It also keeps the loose cut grass from choking or clogging and retarding the proper action of the cutters. On the 2d of March, 1852, Howard, assignee of Sheffer, by his attorney, requested that Sheffer's application might be rejected *pro forma;* and on the 1st of April, 1852, Howard himself made a like request, and the Commissioner accordingly directed the same to be done. On the 1st of March, 1852, the Commissioner declared an interference between the claim of Howard, assignee of Ketchum and McCormick, and Green, and appointed the second Monday in

May (10th) for a hearing. Notice was given accordingly, and on the 13th of May, 1852, priority was declared in favor of McCormick. On the 18th day of the same month and year a decision was made declaring priority in favor of W. F. Ketchum, in the following terms:

"Whereas, upon the appointed day of hearing, of which due notice had been given to the parties, and upon a careful examination of the testimony and arguments filed in the case, it appears to the undersigned that priority of invention of the side-shield track-clearer or scraper claimed is due to the said W. F. Ketchum, he is therefore hereby declared to be the first inventor thereof."

From this decision McCormick took the present appeal, and filed in the Office, within the time directed by the Commissioner, his reasons of appeal.

In his first reason he says that said Ketchum testifies in his own behalf that he never succeeded in perfecting the instrument so as to bring it into public use until more than a year after it had been perfected and introduced into public and successful use by said McCormick; second, that it is not in proof that Ketchum ever constructed a harvester with a track-clearer that worked successfully, or that it was more than mere experiment; third, because the parol testimony on which Ketchum relies to show that he had invented a track-clearer is too vague and indefinite to be received as evidence, while, as Ketchum testifies, the devices themselves, with which he experimented, which are the best evidence, are in existence, and might and ought to have been produced; fourth, because said Howard, being the owner of said Ketchum's and Sheffer's rights, by electing to claim under Sheffer as the prior inventor, virtually disclaimed priority of invention for Ketchum, and, having been defeated under Sheffer, it is not competent for him to disavow his former acts and claim under Ketchum; fifth, a mere general allegation that from the testimony McCormick, and not Ketchum, is the prior inventor.

The first part of the Commissioner's report states particularly the proceedings in the case, which I have already recited, together with some additional facts obtained from the original papers sent up with the appeal. It states as a reason for not admitting McCormick's testimony (taken in a former case) in evidence on the

trial of the case that the same is offered in a case not between the same parties nor upon the same subject-matter. This objection is insisted upon by the counsel for the appellee. As this is a preliminary question, I have supposed it would be proper to determine it at this point. The general principle, as stated by the Commissioner, is admitted to be true; but the reason of the rule sustaining such an objection is that it would not be mutual, and that an opportunity to cross-examine the witness would not be afforded to the party. Now, in the present case, the real and only party in interest was the assignee, who was the same person in both cases, and the subject-matter was the same invention, and an opportunity was allowed him to cross-examine the witnesses. The law, as laid down in Greenleaf on Evidence, is in the case of depositions taken. 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. In this case it would be unnecessarily oppressive to require the party, merely to gratify form, to take his testimony over again, as well as uselessly expensive. The objection is, therefore, overruled.

The report, in further answering the reasons of appeal, is confined to the testimony on the part of the appellee, the effect of which the Commissioner thinks amounts to proof that the invention by Ketchum was as early as the year 1846, and that it is the same in substance as that for which McCormick claims a patent in this case, whose invention was in the year 1849; that the testimony sufficiently shows, according to established legal principles, that said invention was reduced to practice; that the decision was founded mainly on the testimony of Colligan, confirmed by Field, the substance of which he states; that the decision would have been the same if McCormick's testimony had been admitted into the case and considered; that the apparent inconsistencies in Ketchum's testimony may be reconciled; that the word "instrument" is not the word used by Ketchum, Field, or Colligan when speaking of imperfections; the language refers to the machine as a whole, as in the instances of breaking a cutter-bar, &c. As to the reason defining in what a patentable invention consists, he refers to the law as laid down by Judge Cranch in the case of Perry *v.* Cornell (*ante, p.* 66); and as to Howard's being estopped

to disavow his claim under Scheffer, and set it up under Ketchum, he says a man who purchases under a bad title has surely a right to cure the defect by purchasing and setting up a better title.

On the day appointed for the hearing, according to notice given, the parties appeared by their respective counsel; and the Commissioner having laid before the judge the grounds of his decision in writing, with the original papers and the evidence in the cause, and the arguments of the counsel on each side being submitted, it appears that there is no dispute as to the invention for which a patent is asked being patentable; the questions are whether the inventions are the same; if so, whether the appellant, according to the principles of patent law, is the first and original inventor. I think it must be considered clear from McCormick's testimony that in the month of August, 1849, he was the inventor of the improvements as described by him in his specification; that he reduced it to practical use with success in combination with his mowing-machine, and that he has continued to succeed in the use of it; that according to the testimony of the examiner it differs from all others, in having the double inclination of the board in connection with its peculiar shape, enabling it, among other things, to perform the precise function of the crooked stick in Scheffer's instrument. Does it interfere with Ketchum's improvement, under which the appellee claims? The Commissioner in his report says they are substantially the same, and that Ketchum is the prior inventor. This must depend upon the evidence on the part of the appellee and the facts and circumstances in the case, taken in connection with it. I will state the substance of it:

Ketchum (the assignor) in his deposition states that he made an improvement, known as the side-shield or scraper, to his mowing-machine he thinks in the year 1846. The angle was eighteen or twenty degrees. It was made of iron. After that he made the scraper of wood—board—attached by a hinge. He thinks he used the board in this manner in 1847, 1848, and 1849. He has seen the drawing representing Mr. McCormick's and Green's devices, and he considers them the same in principle as his. He is and has been a practical machinist for twenty-five years. Schedule "A" was shown to him. This, he said, repre-

sents his scraper. *B* represents the sheet-iron scraper better than the one he made of board. It is about two years since he perfected his machine. He says: "It is within that time." He was experimenting from 1846 up to within a year, with a view to perfecting his machine. His machine was so imperfect in other respects that it was impossible to tell whether the device of the track-clearer or scraper was going to answer the purpose when his machine worked well. It answered the purpose. The great difficulty with the machine was that it choked or clogged up. Another difficulty was that the proportions were not sufficient in strength. That he was laboring to overcome all these difficulties. He cannot say that he ever had the machine on sale as perfect as it has been since. It has been exhibited at State fairs; at one State fair with this improvement. This scraper was on the machine at the State fair in Rochester last year (1850). The machine has been exhibited at four State fairs; the improvement at none except at Rochester last year; he had seen it to be necessary to have some device for clearing away the grass. He says: "I have considered this improvement the thing to answer the purpose."

He was cross-examined by Mr. Green's counsel, and testified that he made the assignment to Howard the 10th February, 1852; was not then aware of the improvement of Green or any other person; was not positive but that he began to experiment in 1845 in the use of this device. He made the improvement as it appears in the schedule or drawing "*B*" in June, 1846. He does not know when he attached the bottom board; thinks he discovered the angle of eighteen or twenty degrees immediately upon the experiments. He used the machine with that device in 1846, but is not positive about the bottom board. This improvement of itself is not sufficient to overcome every difficulty. The cutter-bar was too weak at first, and prevented the machine from working well.

He was further cross-examined by McCormick's counsel, and testified that a machine was built in 1839 or 1840 by his instructions. It had not the side-shield or scraper as in schedule "*A*." He had no device attached to it similar to that in the diagram in 1839 and 1840. He used it in the harvest of 1836; no one besides himself used this in 1846; others saw it work; the machine

worked so little at that time that he could not tell whether the machine was effectual or not, *i. e.*, the whole machine combined; it was the sheet-iron "6" he used in the machine of 1846; the angle of the scraper was inside or less than a right angle; he did not consider this a perfect machine. After the harvest of 1846 he could not use it on account of the defects in all parts of the machine; he could not tell from the experiments in 1846 whether the scraper was going to answer the purpose or not. He experimented in 1847 with the same machine; he is not positive; they were made openly; machine of 1847 had upon it a scraper similar to the one in schedule "*A*;" he thinks it had a bottom board attached, but is not certain; he thinks he used the machine in 1846 and 1847 without the scraper in some of the trials; the experiments in the fall of 1848 were on the same principles as the former ones; in his improvements in 1848 he strengthened the machine somewhat; there was no great change, chiefly in strength; the machines of 1846 and 1847 were broken up and scattered; does not know what became of the scraper; he left the machine on the Dibble farm, where the experiments were made; he does not know what became of the machine of 1848; he thinks Mr. Hawes, his partner, took a couple of the machines of 1848 out west; it was in July, 1848, he used the machine with the side-shield or scraper, as represented in the diagram at Fig. "*b*," and some with the portion marked "*A*," off; the bottom board was of no benefit; Hawes took the machines out west, partly made by witness and partly by himself; at the time Mr. Hawes went west the scraper was not, in his opinion, in a state of perfection; Hawes took away machines; he does not know what he did with them; he experimented at different times in 1849, but does not recollect whether he made the experiments with the same machine of 1848; he thinks he did; there were some alterations made, but he does not recollect that he made any change in the scraper; the experiments of 1849 made the machine a little better than it was before; in 1849 his experiments were made in Genesee county, at or near Batavia, in the presence of Joseph C. Field, Rufus L. Howard, Judge Soper, and George W. Allen; the machines he used in 1849 were all in his possession; in the harvest of 1849 he did not think the machine a perfect one; these machines all had the scraper attached in 1849; he sold out to Mr. Howard; in August he sug-

gested to him improvements, and since the sale has assisted him with his advice; he sold to him all the improvements he had made or used or might thereafter make; he does not recollect seeing any of the machines in use in the harvest of 1850; he thinks Mr. Harvey Deul used one; he does not know that any were used in that year with the scraper; in 1851 he suggested to Mr. Howard as an improvement the method of bracing the machine from the shoe to the frame with a bar, also a heavy timber parallel with the cutter and above the ground; he thinks there was some improvement made that year in the scraper, but not by witness. It appears that this last improvement in the scraper was made by G. Sheffer. He knew of this. In February, 1852, Sheffer, Green, and McCormick were present, and parties at an examination of improvements, &c. It was a few days before the trial when he first knew of Sheffer's improvement. Some months before the examination he told Howard, when he first showed him Sheffer's improvement, that the principle was the same with his, with the exception of the stick. When he saw the stick operate, he thought it an improvement. That was in the harvest of 1851. He told Sheffer in August or September, 1851, that the board set up on an angle was his. He heard that Sheffer had applied for a patent. He told Howard the same that he had told Sheffer, that Sheffer could not get a patent if he (witness) opposed it. He told Sheffer in February that he was going to apply for a patent for the scraper, but Sheffer still persisted in it. Mr. Howard told him at some time, he does not recollect when, that he was the assignee of Sheffer, and that Sheffer was the inventor, and that he was going to apply for a patent; he did not object to Howard applying for a patent for Sheffer's invention; he knew that he had applied or was going to apply for Sheffer's invention, and he knew the result of Sheffer's application; he knew there was an interference declared, and knew at the time of the examination that the point turned upon the priority of invention between McCormick, Sheffer, and Green; he did not think the invention perfect; the scraper that Howard makes is substantially the same as that of 1846 and 1849; he thought the machines he had sold were perfect, but trial proved them defective; he exhibited the machine with the scraper attached at Rochester in 1851; the same kind of scraper that Howard now makes, or nearly so, he used in the

field with the scraper attached, he thinks, in 1847. Witness proceeds to state the dates of his patent, the sale to Howard, and the two assignments, one of July 5th, 1851, the second of February 27th, 1852. The consideration for both assignments referred back to the original $1,000. Up to the time of his sale to Mr. Howard he did not have the machine with the scraper annexed on sale. All his machines which have been built before his sale to Mr. Howard have been built for experiment. The reason why he did not get his improvement patented sooner was because he was not able.

[A resumé of other depositions to the same effect follows.]

In coming to a decision upon the effect and weight of the testimony, it is proper to state that I think there is much justness and force in the able arguments of the counsel on the part of the appellants in this case in the views they have taken of the circumstances and facts appearing in the case from the proceedings and the testimony of Ketchum relating to the conduct of Howard and Ketchum. The strange inconsistency and contrivance on the part of Howard with respect to the assignments, and the imposition practiced on the Government by him, together with the indifference and neglect on the part of Ketchum to apply for a patent, with the knowledge he possessed, that others had been applying for the same invention, and his consent and approbation that Howard should apply under the assignment of Sheffer—his conduct and silence under such circumstances bring him within the reason of the rule that where a man has been silent when in conscience he ought to have spoken he will be debarred from speaking when conscience requires him to be silent. These and other circumstances certainly tend to militate against the practical reality of Ketchum's invention and against the fairness of the claim for a patent on the part of Howard. I do not understand the decision of the Commissioner, however, as going to the extent of declaring the appellee to be entitled to a patent. The question of unfairness and imposition is not, therefore, directly before me on this appeal. On the other part of the subject the rule has been correctly stated, that a mere principle or idea, until it becomes properly and practically clothed, is not patentable. And it may also be stated that a long course of mere fruitless experiments to reduce the principle to practice would not be

sufficient to prevent a subsequent original inventor, who had perfected his invention without knowledge of the prior invention, from his right to a patent; but, on the other hand, where a prior inventor has been using reasonable diligence to perfect and adapt the invention to practical use, his right will be preserved and protected, although his success may not have been perfect. "The expression in our statute means that the patentee must have been the inventor first in point of time before all others." With these these principles to guide me, I feel obliged to come to the same conclusion with the Commissioner of Patents, that, even putting out of the case Ketchum's testimony (unless I could bring myself to believe the other two witnesses perjured), that Ketchum's invention and McCormick's are substantially the same—I mean the principle is the same, though there is a difference in having the double inclination of the board—and that Ketchum, assignor to Rufus L. Howard, is the prior inventor, and I do so decide, there being also sufficient evidence to show practical use.*

P. H. Watson, for appellant.

W. P. N. Fitzgerald, for appellee.

IN RE SAMUEL SEELY, APPLICANT. APPEAL FROM REFUSAL TO GRANT PATENT.

COMMISSIONER AND EXAMINERS EXAMINED UNDER OATH.—Taking the sections of the acts of 1836 and 1839, relating to appeals from the decision of the Commissioner, together, it is evident that the judge succeeded to the power formerly conferred upon the board of examiners to require the Commissioner and the examiners in the Patent Office to furnish such information as they might possess relative to the matter under consideration, and so *held*; that an examiner might be interrogated under oath as to the peculiar nature and features of the invention in dispute.

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*The patent was subsequently issued to Rufus L. Howard, assignee of William F. Ketchum, No. 9737, May 17th, 1853.